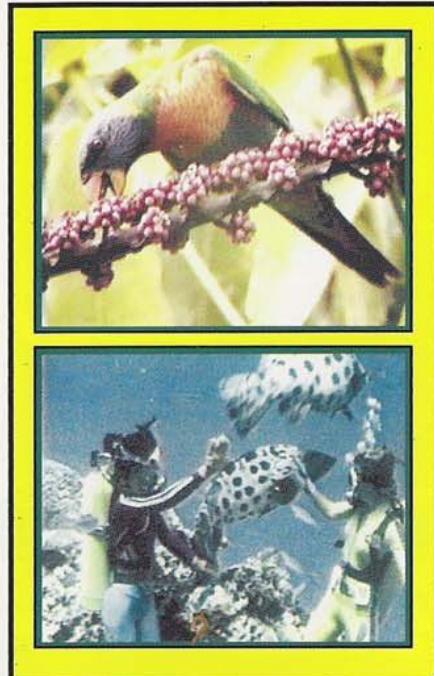


Australia's
Most Popular
Amiga
Magazine!

Australian Commodore & **AMIGA** *Review*

For Professional and Home Users



Review: VIDI 12 Frame Grabber

Hypercache
Speed Up Your Hard Drive

AMIGA CD 32 Game Console

Show Report
World of Commodore



**Final Copy: Release II • Latest NEWS • HOT PD
Tutorial - Sound Digitising • Review: Hired Guns**

AMIGA 1200

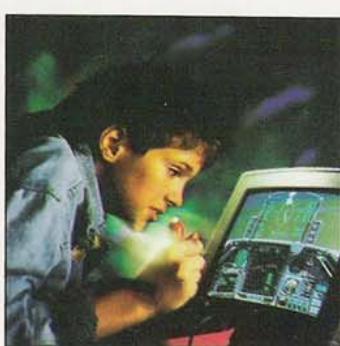
THE BEST OF ALL WORLDS



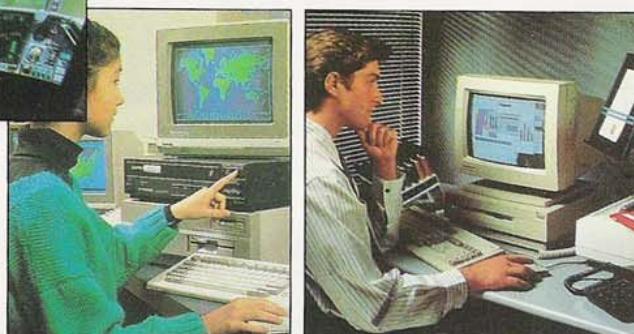
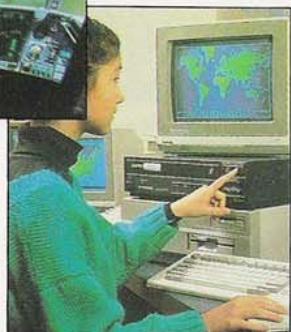
USING AMIGAS

Amigas let you decide how you use them. You can use the point and click system, which we call Workbench, or you can type commands on the keyboard as on MS-DOS computers. Most people prefer Workbench, it is easy to learn and great fun to customise. With Workbench you move the pointer around the screen with the mouse and click on little pictures called icons, these represent functions you want your Amiga to do.

All Amigas can run several programs at once: so you can print a letter, sort names and address lists, listen to some music and play with a paint program all at the same time.



Even the software you buy for your Amiga will be easy to use and great value for money, just like the computer itself.



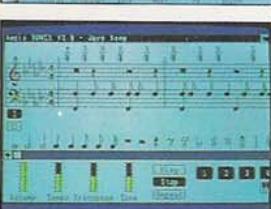
AMIGA SPECIALITIES

The Amiga is a great tool for work and pleasure but it excels at:

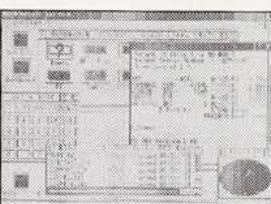
- Anything to do with graphics or video. Being video compatible means that the picture can be displayed on a T.V. or recorded on video. Having a graphics co-processor makes the action fast, whether you are reading through a large report or playing a super-action game.



- Built in digital stereo sound on the Amiga gives you concert quality reproduction. With an inexpensive add-on you can even digitise your own audio and then experiment with it on the screen.



- With the addition of optional emulators, the Amiga can also run MS-DOS * or Macintosh * software - giving you the best of all worlds.



Commodore

For a supplier near you call (008) 805 067
(outside Sydney metro area) or (02) 428 7666.

Contents

Features

6 Show Report

The World of Commodore Amiga Show

16 Vidi Amiga 12

Capture video to disk without the usual price tag

20 Update: Final Copy II

Significant new features in Release 2

22 Amiga Games Console at Last

The ultimate games machine

24 How to get Perfect Sounds

Achieve better results when sound digitising

27 A Quick Intro to Desktop Video

Even a standard Amiga can produce exciting video footage

32 Hypercache Professional

A new quick and reliable cache program

Regular

4 Ram Rumbles

14 Notepad

36 Education Column

The new improved *Australian Graphics Atlas*

42 You Can Do - Quickshots

A communications program and a printer utility

46 Deluxe Paint Tutorial

Floating Baubles - more uses for the animbrush

50 C64 Column - Reviews and letters

54 Amos Column - Write better games without TOME

58 Down the Opal Mine - OpalPaint's Zap function

60 Hot PD - Latest in almost free software

Entertainment

68 That's Entertainment

News, letters, Hall of Fame

74 Superfrog Solution Part 2

72 Game Reviews

Hired Guns, Trolls, Graham Gooch World Class Cricket

77 Adventurers Realm

Hints & Tips, News, Trading Post, Problems, Clever Contacts

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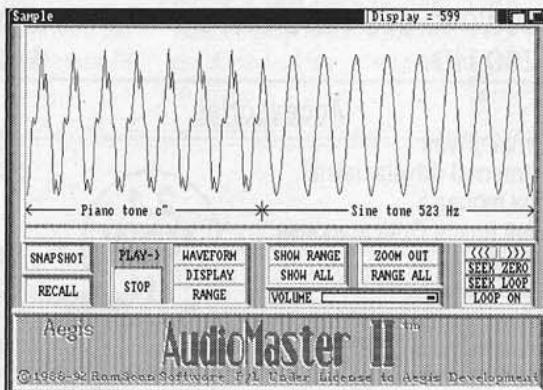
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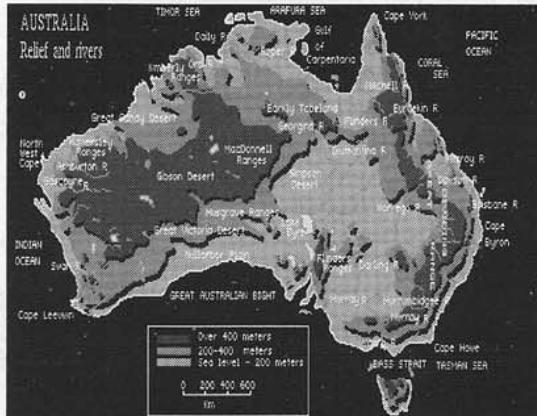


16 Vidi Amiga 12



24

How to get Perfect Sounds



36

Australian Graphics Atlas

Amiga Peripherals at Perfect Prices

Memory Expansion

A500/512K RAM	\$49
2 meg A500/0 & clock	\$89
4 meg A500/0 plus clock	\$99
A600 1 meg w/clock	\$99
8 meg A2000/2 meg populated	\$299
A1200 Ram with 68881/co-pro 0 meg	\$295
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Ram/GVP A500/A2000 HD and AxRam 4 (2meg)	\$139
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Ram A3000 static column (per 4 meg)	\$240
A4000/32 bit (per 4 meg)	CALL

A4000/030	\$2399
A4000/030/240 hard drive	\$2879
A4000/040	\$3899
A4000/040/240 hard drive	\$4495
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1.44 Internal drive/external	\$CALL
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ZXR 2400 up to 2400 BPS with fax mode	\$389
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144 FM fax data	\$579

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A600/A 1200 IDE Connor 2.5 inch 85 meg	\$479
A600/A 1200 IDE Seagate 2.5 inch 127 meg	\$559
A600/A 1200 IDE Connor 2.5 inch 127 meg	\$599
A600/1200 IDE Seagate 2.5 inch 209 meg	\$779
SCSI Quantum 52 meg 3.5 inch	\$360
SCSI Quantum 85 meg 3.5 inch	\$369
SCSI Quantum 127 meg 3.5 inch	\$459
SCSI Quantum 170 meg 3.5 inch	\$479
SCSI Quantum 240 meg 3.5 inch	\$679
SCSI Quantum 525 meg 3.5 inch	\$1499
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Computer Man

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Editorial



World of Commodore was a great shot in the arm for the Australian Amiga community. Although there's no arguing the show didn't quite compare with last year, there were certainly more than enough highlights to make it a truly worthwhile event. See our full report on page 6.

One thing clearly evident was the increased amount of video hardware available. Although delivery times are still measured in months, when Opal Technology manage to deliver the new Roaster add on, the PAL toaster we've all been waiting for will truly be here.

Hi-resolution display cards such as the Retina and Picasso are also heralding in a new age of large monitors excellent for desktop publishing, CAD and 3D modelling. The high end Amiga market is becoming more work station like as the years roll by. Networking is also set to improve dramatically with Commodore's own Envoy, and the locally developed Quick-NET systems both almost ready for shipping.

At the other end of the scale, Amiga computing continues to improve in affordability. World of Commodore saw prices tumble - a good indication of where they're headed, even if the tags were only temporary on the day.

Commodore have made some tough decisions over the past few months. I believe they've made the right ones. The PC range of Commodore machines is no more. Yes, Commodore are now concentrating on the Amiga 100%. The older machines such as the A500 and A2000 are no longer in production. However, third party support will continue for a good while to come. This is perfectly sensible considering they're around six years old.

Commodore have also had to cease production on some more recent models. This news is a little disconcerting, but once again considering the direction of Commodore, it's not at all surprising. The Amiga 3000, a machine close to the heart of many Amigans in recent times, has moved over to make way for the A4000. The 3000 had many good features which are not yet in place on the new machine - such as the hardware display enhancer and SCSI port. Hopefully these will come in time.

A lot harder to explain is the Amiga 500 PLUS and the Amiga 600. These two machines seem to have got caught in between the arrival of the AGA machines and improvements to the old models (ECS, Workbench 2.0). Although quantities of the A600 are still around, I would not recommend buying one if you hope to upgrade your Amiga much in the future. Expandability is not the best - you would be better off with an old A500. Of course, it's hard to argue with the amazing pricing Commodore are dishing out on these models.

Andrew Farrell



A 500

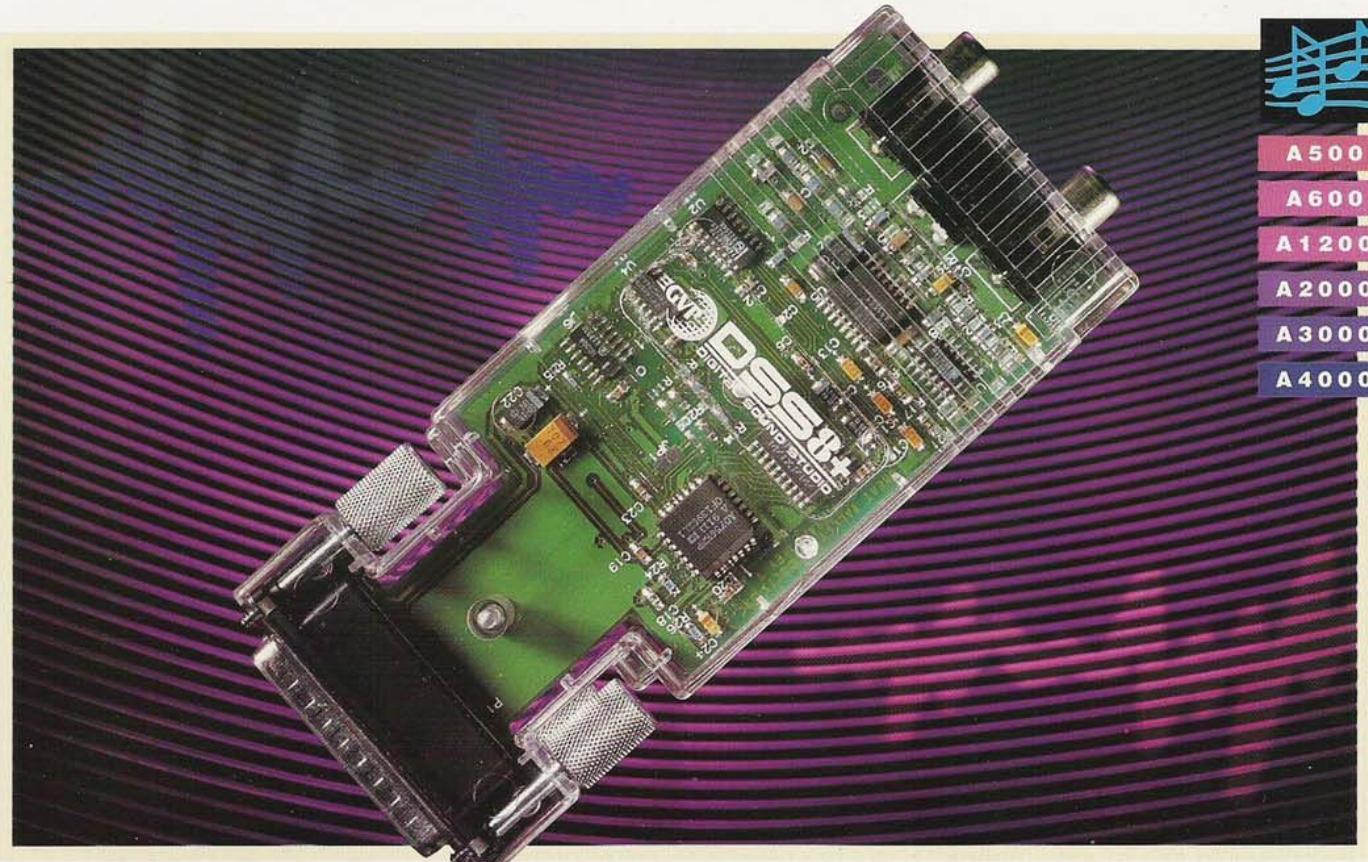
A 600

A 1200

A 2000

A 3000

A 4000



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UPDATE COLUMN

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Our new phone number is (02) 417 7255 and our fax number (02) 417 7099.

Amiga and C64 owners: During the move we have found some older products and also, as always happens, some of the packaging has been damaged. As it is not possible to supply these products through our retailers we have decided to offer you the possibility of buying them direct from us. Obviously, there are great bargains to be had and if you would like to save heaps of money, then ring (02) 417 6237 for a list of all these bargains. In amongst these we have not only software but also joysticks, expansion cards, books etc etc.

Amos Professional: We are pleased to announce the release of the Amos Compiler for Amos Pro, so rush into your local Amiga retailer to get your copy.

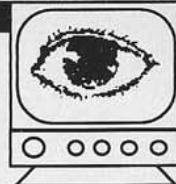
This will be the last update column for a few months till we get settled into our new premises, but we hope to be back with new and exciting information towards the end of this year.

Chow for now!

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Chatswood NSW 2067
Phone: (02) 417 7255 Fax (02) 417 7099

Pactronics

Media Watch



After years masquerading as Ram Rumbles, our regular look at the Amiga in the media has finally earned a new name. Ram Rumbles is no more and the new name, Media Watch, will now herald forth the focus of this page - Amiga in the media.

If you've seen the Amiga in the news, performing an interesting task, working hard behind the scenes, or anything that you feel somehow relates to Media Watch, send it in. Or you can modem it to our new BBS on (02) 816 4714.

Would You Believe

IBM will be making the new Atari Jaguar - a multimedia machine based on a new 64-bit RISC processor with a CD-ROM drive and 16-bit sound. The machine sounds fast, but there was little mention of software in the press release circulated recently. IBM will also help distribute the machine. An interesting announcement on the heels of Commodore's own Amiga CD 32.

In other amazing stories, a CD-ROM containing famous stories about Mars is being sent to ... you guessed it, Mars. A CD-ROM drive will not be included, however a Microdot with all the necessary instructions is stamped on the CD.

Atari vs A1200

We've been literally barraged with letters from irate readers who can't believe Atari is getting away with the comparison they've been publishing between the Atari 1040ST and the Amiga 1200. Many are saying the chart which has appeared in leading Australian newspapers as part of a heavyweight advertising campaign is downright misleading.

The full page ads stack the two machines side by side, but several glaring omissions make it very misleading, according to some. For example, the processor of each machine is listed merely as the 68000 family. Yep, they're right. But, isn't that like saying "combustion engine" in a car advertisement compar-

ing the latest Ford Falcon with a Ferrari?

"Hey, they've both got combustion engines, so they're both the same!" Sorry guys, perhaps Atari owners will fall for that one, but it seems Amiga users were quick to spot the fact the Amiga 1200 has in fact got a 68020 processor which is around five times the speed of the old 68000 in the 1040ST.

Well, that's just the tip of the iceberg Atari's seemingly unsinkable comparison chart is steaming towards. In almost every other department, the comparison either misses out key Amiga features or understates the differences. So much for fair advertising!

Apple Core Ads

Would someone like to explain the meaning of the No Problems ad which Commodore has been running in this magazine? Better still, could you come up with a better caption? Or a funnier one? Over the next three months we will give one free subscription to the best caption submitted to Media Watch. The winner will be selected by me, so make sure you include any spare out-of-print pre-plastic Australian currency you might have lying around with your entry. Anyone can enter, and entry is free. Send your entry to the magazine, clearly marked as Media Watch.

Amiga Animation

Did anyone catch the ASDG video running on the Amazing stand at WOC? Apparently *Morph Plus* has been used extensively to create morphing effects for *Quantum Leap*. Impressive stuff - some of it full motion morphing just like *T2*! There's more Amiga animation on TV these days too - if you can spot where, write in to Media Watch and you could win a subscription to ACAR or at the very least, you'll see your name in print. Better than a speed-ing ticket!

Andrew Farrell

A. AMIGA®—THE VIDEOGRAPHER'S VIDEO-MAKING COMPUTER, FOR ANIMATION, GRAPHICS, CHARACTER GENERATION, AUDIO, ETC.

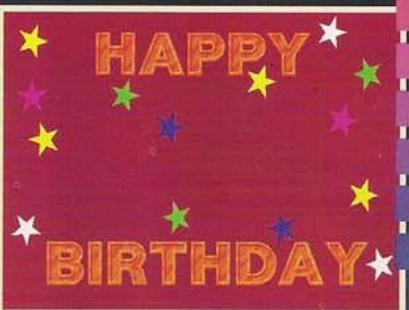
B. BIRTHDAY—OR ANY BIG EVENT IN YOUR LIFE

C. CAMCORDER—ANY FORMAT, FOR LIVE VIDEO

D. DECK—VCR, ANY FORMAT, WITH PRE-RECORDED VIDEO

S. SOUND—ANY SOURCE, SEPERATE PRE-RECORDED, OFF VIDEOTAPE OR LIVE LINE INPUT

G. G-LOCK™ BY GVP—FOR SIMPLE TITLING OR MIXING IT ALL TOGETHER



A 500
A 600
A 1200
A 2000
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A 4000

THE BUILDING BLOCKS OF BETTER VIDEO

G-Lock™ Makes Your Video Connections With:

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- Full ECS/AGA support for full compatibility with new A1200 and A4000 systems!
- Compatible with popular titling software like AmigaVision™, Scala-Multimedia 200™ and Gold Disk's Video Director™.
- Separate versions available for standards around the world. Compatible with NTSC, PAL and SECAM.

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G-Lock's six video control panels enable you to perform a wide array of special effects on still or motion video including ...

- ▶ Colorizing for unique visual effects.
- ▶ Creating your own "classic" black and white videos using the Colorkill feature
- ▶ Color filter effects.
- ▶ High-quality keying effects with bitplane or chroma keying.
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G-Lock's dual-input audio panel switches, mixes and shapes sound for effects such as ...

- ▶ Combining stereo channels or separate inputs without a "Y" adaptor.
- ▶ Treble and bass equalization.
- ▶ Plus, add DSS8 or any Amiga created/modified digital audio samples to your final mix!

Professional video processing + audio processing + a powerful but simple interface + creative special effects, make G-Lock the cornerstone of your multimedia productions!

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world of commodore

Show Report

Amiga users from all over Australia - and beyond - flocked to Sydney's Darling Harbour for the third official World of Commodore show, from the 2nd to the 4th of July.

The place was crawling with Amiga experts and amateurs alike, and the show saw the debut of hardware that'll put more Amigas into professional video studios - as well as cheap low end machines for the home market.

Those who attended may have noticed that Commodore's promised "new mystery Amiga" was nowhere to be seen, and indeed thanks to last minute stand reshuffling our show guide didn't quite line up with the exhibitors. Just to help things along, four major train lines

were closed on Saturday, but despite these glitches the show was a great success.

For most users, the highlight of the show was the dirt cheap prices being charged for the new Amiga 1200 and 4000 machines - 1200s with 2Mb of RAM and a 40Mb hard drive were going for \$849 at the Harvey Norman stand by show's end, and A4000/030s were less than \$2700 - although not the \$695 Harvey Norman accidentally advertised! The Brashs stand was even bigger, and also loaded with cut price Amiga gear.

CD-ROM

The surprise hit of the show was the A570 CD-ROM drive for the Amiga 500; it started at \$200 and was \$185 by Sunday afternoon, leaving quite a few dazed buyers wandering around the

show looking for an A500 to go with it.

Richer CD-ROM aficionados fell upon Sigmacom's \$400 external SCSI unit with two discs with cries of glee. Sigmacom were shifting quite a few of their \$650 Quantum 240Mb hard drives, too.

Australian Multimedia magazine was on sale at the Consolidated Publishing Solutions stand, and although it's still dominated by IBM compatible and Macintosh applications, the Amiga has gained a definite toehold in the professional multimedia world.

For graphics, the Amiga is ploughing ahead again. The AGA chipset gives even domestic users near-24 bit image quality, and 24 bit boards themselves are dropping in price and increasing in quality. The "24-bits and pieces" newsletter being distributed on the Desktop Utilities stand keeps Australian Amiga



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**Everybody's talking multimedia revolution.
Allow us to light the fuse.**

A lot of apples were bruised when we first introduced Scala, the professional presentation package. With the new Scala MultiMedia MM200, they will be blown into oblivion!

Let us introduce a few of the features that make Scala MM200 combined with the Amiga the world's most powerful multimedia environment:

SCALA EX Scala EX

A revolutionary new plug & play system, for the integration of laserdisk, still video, MIDI, or CDTV sound in your Scala presentation. Extra EX'es, such as 24 bit graphic support and VCR control are also available.



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More than 80 amazing, smooth and professional transitions provide possibilities previously unseen on the Amiga.

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Enhance your presentations with voice-over, music and special sound effects! Scala offers total control of recording and play-back.



**MM2II Shipping
Full AGA Support**

AnimLab

With this bonus program you can make your animations play up to four times faster!

The press writes:

"The word multimedia has been battered and misused... Scala on the other hand, know exactly what multimedia is and what to do with it!" *Amiga User International (UK)*

"...the best program in show business." *Amiga Format (UK)*

"Scala MM200 is the kind of software that many serious users simply can't afford to be without." *Amiga Computing (UK)*

Scala MM200

— for video titling, training, business presentations, interactive use — or any multimedia combination.



Scala Shuffler

Instant viewing of your whole presentation! You can see up to 112 pages at one time. Simply shuffle them around with the mouse!



Scala Buttons

Creating interactive hotspots has never been so easy! Scala MM200 even includes full support of variables.

Scala LINGUA

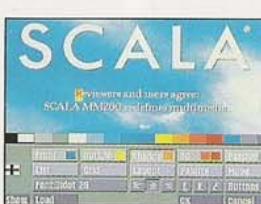
The multimedia language Lingua with its close link to ARexx puts the advanced user in total control!



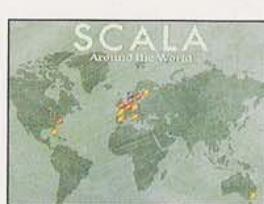
The Scala main menu.



Scroll text by Scala.



The Scala edit menu.



It's a Scala world!



The Scala Shuffler.

SCALA

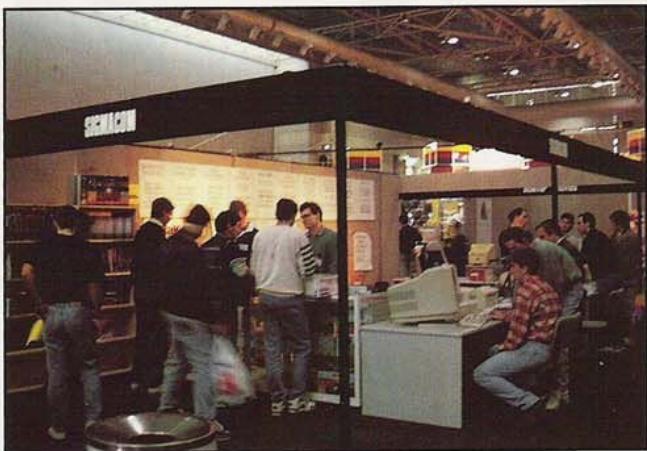
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artists up to date with the tricks of the trade, and several new graphic options were also on display at the show.

The German-made Picasso II graphic card for A2000, A3000 or A4000 machines was on show at the Color Computer Systems stand, and it basically offers AAA chipset (you know, the one that'll come after AGA) functions right now.

It's only a Zorro-II card - not Zorro-III - but its built in blitter lets it redraw screens at 30Mb per second and copy at 15Mb/s; in other words everything scrolls bleeding quickly. It runs on all processors, uses its own 1Mb of onboard RAM instead of your precious chip RAM, runs up to 1280x1024 pixels and

up to 82Hz refresh rate, and gives 16.8 million colour, 33,000 colour and chunky pixel modes, and the best part is it's supposed to be near perfectly compatible with everything, with no fancy installation procedures.

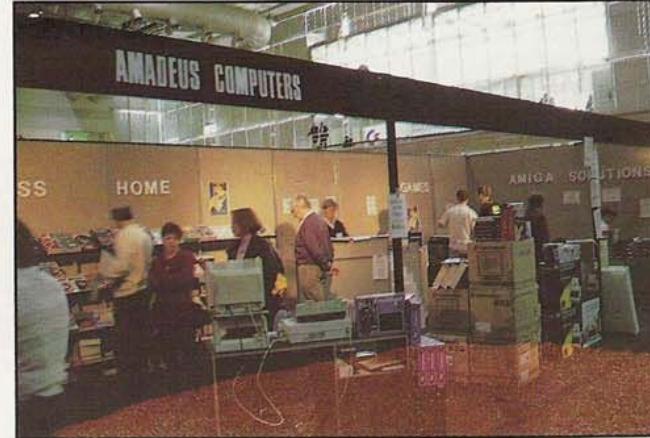
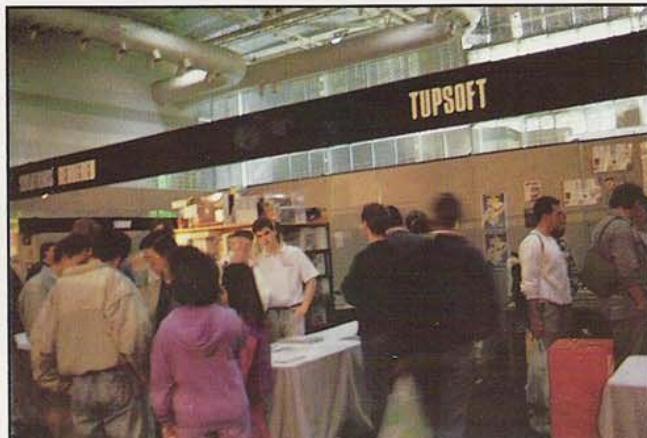
Roaster Power

On the same subject, Opal Tech were showing off their (very) long-awaited Roaster chip for the acclaimed OpalVision board, and the combination, when it's completely up and running, will grab the American Video Toaster by the scruff of the neck and punt it right out of the stadium. The Opal board runs in 24 bit RGB, supports NTSC and

PAL, has an audio mixing unit, plays animations, does chromakey, multitasks properly, has as many effects as you can dream up and comes with the brilliant *OpalPaint* software. Basically it's 90% of a monster video studio for 10% of the price.

So far the originally titled Roaster chip itself is finished and the video module is in very late testing - it may well be out by the time you read this - but it'll be two months or most likely more before the other modules come out, although they've been sourcing components for more than six months now. Opal followers, who by now could lecture Buddha on patience, will be acclimatised to this situation.

continued on page 12

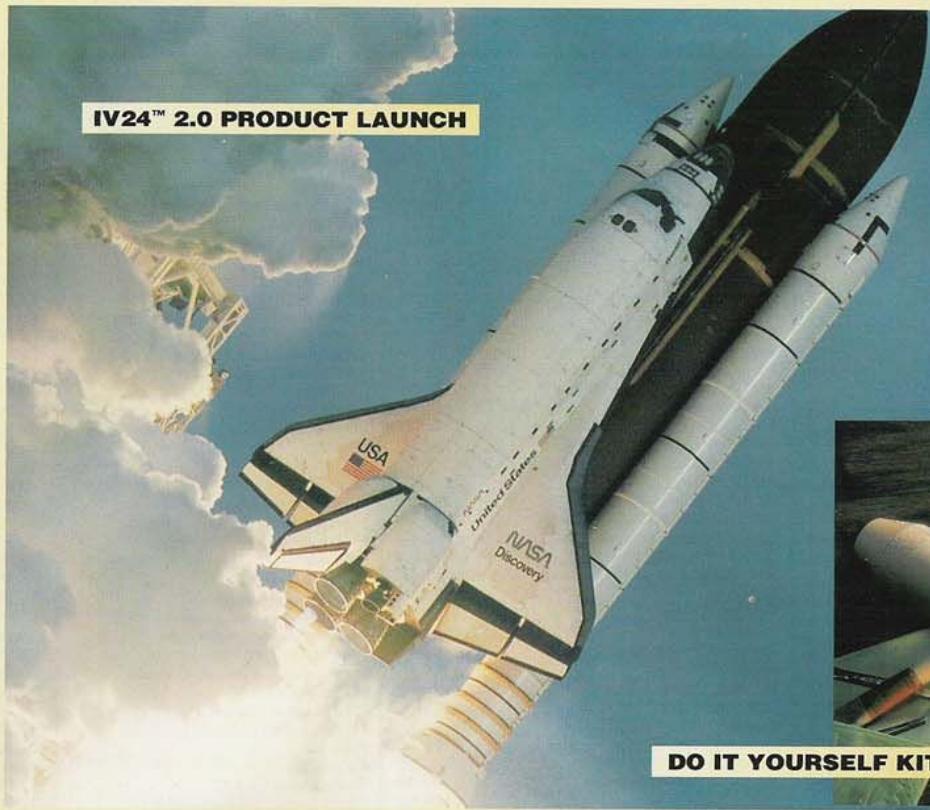




IV24™ 2.0 PRODUCT LAUNCH

A2000
A3000
A4000

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ROCKET SCIENCE MADE SIMPLE

...HIGH FLIER VERSUS "SOME ASSEMBLY REQUIRED"

Some 24 bit video boards make you pay your money and take your chances. You take a chance that they'll be up and flying in the future. You take another chance that all the "enhancements" they promised will be around tomorrow. Or that they'll be around tomorrow. Why take any chances when GVP has everything on your countdown list *today*?



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- VIU-S™ with RGB, composite, S-VHS
input/outputs.....
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(Betacam, M-II compatible) input/outputs.....
- 2-way moveable, sizeable PIP
(picture inpicture) display,
(video over application or application over video).....
- Digital and analog key inputs.....
- Captured image retouching/processing.....
- Video switcher transitions.....
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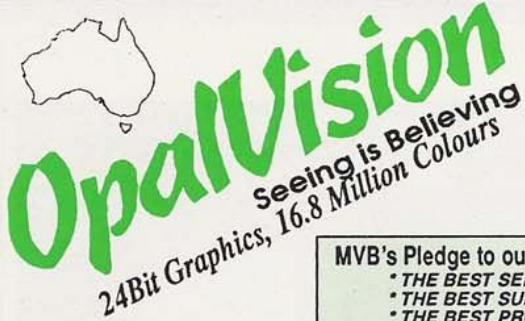


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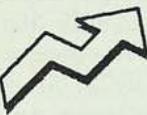
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Getting back to the mainstream, UK house Meridian Software Distribution were selling some hard-to-find titles at excellent prices, including the new *Gunship 2000* game, stocks of which sold out in minutes on Friday morning!

User groups and bulletin boards also had a strong presence at WOC. East Coast Amiga, Eastern Suburbs User Group, Hornsby User Group and the Australian Amiga Users were all spreading knowledge and collecting new members, and the Amiga Connection BBS, now NSW's biggest Amiga specific board and working on being Australia's biggest, had its own stand with Mario Nicotra pressing the flesh and flogging the hardware.

The Australian Amiga Users stand was also displaying QuickNet, a complete ethernet networking system with memory expansion on the card too. QuickNet, in essence, lets any machine on the network have access to all the devices on all the other machines, transparently and really quickly. GP Software were showing their Oxxi-Novell networking system, along with their established sampling, sound enhancing and memory expansion hardware, not to mention the range of high density Amiga floppy drives which are finally locally available.

The Amiga Graphic Artists Special Interest Group (thankfully shortened to AGASIG), which deals with most graphic programs and also does miscellaneous service and upgrade work, was showing off the efforts of its members, right opposite the indomitable Ergo Works, regulars at every computer show, with their brilliant back-support truss that feels much less odd than it looks.

BASIC programmers were checking out the latest release of Blitz Basic on the Acid Software stand. Blitz 2, which combines much of the speed and power of assembler with the ease of use of BASIC, has drawn rave reviews around the world for its capabilities and system-friendly operation.

The show enjoyed a reasonably strong crowd despite the train hassles, and most exhibitors did a roaring trade; as a direct result of WOC Brashs will now be carrying high end Amigas and plan to return to next year's WOC. Overall the show was a success, and the continuing devotion of Amiga users to the platform augers well for the future.



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Face it. The more you do with your Amiga, the tougher it is to organize hundreds of files, directories and programs. How do you copy a file? How do you view and manage multiple directories? Which viewer works best with which files?

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Making Disk Management easy is just the beginning. Directory OPUS knows what your files are - even if you don't. Want to see any image file, regardless of format? Play sound files or even a music file? Run an animation? Just point & click with OPUS. Want to see what's in a Workbench drawer? Just drag and drop it to see a full list of its contents. And there's more. You can even use OPUS as a "home base" for common tasks like printing or searching for files, and for uncommon tasks like file encryption.

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Directory OPUS makes it easy to start your applications. Using the point and click configuration utility you can customize your Buttons and Menus and even teach Directory OPUS to recognize new file types. Got a word processor? Teach OPUS to run it and edit a selected file - it's a breeze!



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- Harold Williams, Power User



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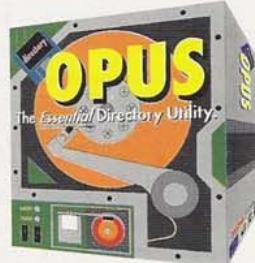
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New Commodore Products

Commodore has officially released the A4091 SCSI-2 controller for the Amiga 4000, which allows 4000 users to run much faster drives than the included IDE unit. The 1940 and 1942 dual sync monitors have also been released to complement the new AGA machines, although they'll work fine on any Amiga. They offer flicker free high resolution modes and built-in stereo speakers and their prices compare favourably with the old 1960 multiscan monitor.

Commodore Cutbacks

The recession is finally catching up with Commodore, despite its amazingly strong performance in recent years compared with the other major computer manufacturers. Various stories have been surfacing about layoffs in Commodore departments, along with financial losses and a consequent plunging share price.

Of course, this isn't anything new; IBM is still trying to figure out what bit of it does what, Apple is rumoured to have sacked about 4000 people and clone dealers have been running at near-zero margins for years.

Most of Commodore's cuts have been to its IBM clone division, but the Amiga side hasn't escaped completely unscathed. Development of the new AAA chipset (the one after AGA) continues, and we can expect to see the new AGA based console machine aggressively marketed around the world.

CedPro Improved

ASDG's *CynusEd Professional* is the editor of choice of many programmers - and many other people who have to shove lots of text around. It's only problem was that it hadn't been upgraded for three years now, and so it had a few disagreements with Workbench 2 and 3. Well, ASDG has now released *CEDPro 3*,

which fixes these glitches, and also adds localisation, macro editor, system clipboard support and search and replace history. It's an evolution, not a revolution, but this just shows how good *CEDPro* was to begin with.

Babylon 5

Amiga graphics freaks have been raving over the "thinking man's Star Trek", *Babylon 5*, which features extensive Amiga generated professional graphic effects, but until recently there was just a pilot episode with no concrete plans for a series. All This Has Changed with the official decision by the US Prime Time Entertainment Network to run a 22 episode series. Not a peep has been heard about Australian release dates, though.

Microprose Absorbed by Spectrum Holobyte

Gamers will be interested to know that Spectrum Holobyte, makers of the "Falcon" series games among others, have been pumping millions into MicroProse, creators of many military simulators including the brilliant new *Gunship 2000*. A merger will follow, with Spectrum owning 60% of MicroProse, and the combination will corner around 17% of the home computer game market.

68060 - Official Specs

Motorola has released further specifications of the to-be-released 68060 processor, which, in brief, will offer three times the power of the current 68040, which itself is about five times as fast as the 68030, which beats the 68000 by a factor of about ten. So machines running on the 060 will be around 150 times as fast as the 68000 based plodder.

Interesting features include the ability to power down parts of the chip which aren't actually doing anything - which

should mean the chip doesn't need the huge heatsink and fan assemblies of most recent CPUs. The 060 will also run from a 3.3 volt supply, as opposed to the common 5V. This makes it well suited to portable computers. The 060 should be available in small quantities in the third quarter of 1993, but real supplies probably won't happen until early 1994.

While Motorola's been busy on several different fronts developing chips for other architectures, it's said the 68000 series will be alive and well until at least the year 2000.

SCALA Again ...

The ubiquitous SCALA Multimedia has found yet another home, this time at Perth International Airport where it's being used to display passport and immigration information, among other things, to arriving passengers. Australian Customs plans to implement the system at all of Australia's international airports.

Sony buys Psygnosis

Sony Electrical Publishing Company, the digital multimedia division of the international megacorporation, has acquired Psygnosis, makers of many of the Amiga's most popular games. Psygnosis will now be developing software for Sony's interactive CD system in addition to their other activities, and this raises questions as to whether Psygnosis will be allowed to develop software for other platforms when Sony's entertainment system is up and running.

Amiga Night Classes

If you're looking for help with basic or more advanced Amiga operations, Day's Amiga Night Classes could be an economical way to get up and running. There are three weekly three hour sessions in each course, and the classes are based in Granville, in the Sydney suburbs. For more information call (02) 622 4746. □

NOTE: We can assure readers that the company referred to as XXX in Letters on page 14 of the July issue was not MVB Computer Supplies.



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Vidi Amiga 12

by Walter Starck



Seen a fleeting glimpse on the phosphor screen of something you'd like to tart up in Deluxe Paint? VIDI-12 will let you capture video to disk without the usual price tag.

One of the best things about personal computers is that as the technology gets better and better it also gets cheaper. The Vidi-Amiga 12 is a case in point.

Until now there were three categories of Amiga video digitisers. At the low end was the cheap and nasty with results to match. At the high end there were high quality real time frame grabbers (usually incorporated into 24 bit display systems) costing about as much as the computer itself. Then, for the rest of us, there was Digi-View, cumbersome and painfully slow but yielding pretty good results.

Recently, after damaging yet another favourite video tape image by leaving the VCR too long in pause mode while waiting for Digi-View to complete its interminable scans, I decided it was time for a new digitiser. I had seen ads and reviews for the Vidi-Amiga 12 in British Amiga magazines. It promised quality results, one second RGB grabs, a built in colour splitter and the price was right. Much less in fact than a Digi-View plus a colour splitter.

Local or over the seas?

Now I faced the perennial dilemma. Do I buy from a dealer here or order from an overseas source at considerable discount? For me, living in the Daintree rainforest, it's mail order in any event and inevitably lengthy delays if anything has to be returned. So, I decided to risk it and go for the savings - \$150 rather than \$275. All I had to do was pick up the phone and place my order.

My first call resulted in a recorded message advising of a disconnected number. Now I understood how they could offer such great prices and still stay in business. They couldn't!

I moved upmarket a few dollars and called another vendor. This one did not accept overseas orders. Try another, this time they wouldn't accept payment by credit card but wanted a bank cheque. This was really educational, already I was beginning to understand why the UK economy doesn't work.

Fortunately I had not yet run into the "Mr Earlobe is on another line will you hold" routine so the calls were brief, but still Telecom was eating into my putative savings. The situation was getting desperate.

I tried again. This time the ad promised "No. 1 in customer service" and they were, friendly and knowledgeable plus a 15% discount for the VAT which is not applicable for orders from outside the EEC. Also, they were blessedly quick so there was still hope of snatching victory from the jaws of Telecom.

Half digested crayons

Two weeks later the package arrived. I connected up my Sony V5000 Hi 8 camcorder for input and booted the software. I wound the tape to a nice image of a rainbow lorikeet, hit the pause button and grabbed my first image. In a second the grab was completed and I waited while the RGB scans were mixed to display the finished image. The result was worse than awful.

It looked like some kid had eaten a box of crayons and thrown up on the screen. There were random flecks of colour scattered around amidst a sickly puce background. With some imagination, here and there you could discern vestiges of the source image.

I persevered. Experience has taught me that with computers when new stuff doesn't work it's more likely the result of improper usage than an actual fault. Often too the manuals neglect to mention basic essentials. They are written by people so familiar with the subject that basic things may be so obvious as to have become invisible. Anyway this stuff isn't meant to be easy. If it was everybody would be doing it and it would no longer be interesting.

Switching snags

Eventually I discovered that signal attenuation and noise induced by my parallel switchbox and cable to the parallel port were the problem. When you plug the Vidi-Amiga directly into the parallel port the problem disappears and

the unit performs as claimed, yielding excellent results. One catch though, you can't plug the Vidi-Amiga directly into the parallel port on the 2000 due to interference with the video port.

This is not a problem on my 4000. With other model Amigas I don't know. You need 40mm clearance to the left of the port and 10mm to the right (as viewed from the rear) to accommodate the Vidi-Amiga. Where interference is a problem the manual recommends a short ribbon cable. Judging from my experience the shorter the better, 100mm would be long enough.

Up and running

Installation is simple. Click on the installation icon and you are asked if you want Vidi-Amiga installed on your system disk. If, like me, you have separate hard disk partitions for your system and applications software and answer no, you are returned to the opening window.

"It looked like some kid had eaten a box of crayons and thrown up on the screen"

dow with no explanation either on screen or in the manual.

If you answer yes, there's a brief write to your system disk or partition, after which you may copy the Vidi-Amiga 12 software wherever you want provided you name it VidiAmiga12 with no spaces.

The software is straightforward and easy to use. There is a main window providing access to six function windows. Two permit selection of grab and display mode preferences. Another controls the actual grabbing process itself,

VIDI-Amiga 12 Specifications

- Input: Composite via RCA socket Y-UV via S-Video socket
- Power: via Amiga external disk drive port (cable included)
- Capture res: 320x200 or 256 (NTSC or PAL) plus interlace
- Palette res: 12 bits (4 each RGB), 4096 colours, 16 grey shades
- Display: 2 colour to 256 colour plus HAM & HAM8
- Interlace, High Res and Overscan
- Grab time: 1/50 sec for non-interlaced monochrome. 1 sec for interlaced colour

Overscan capture is available. The high-res display is apparently achieved via software interpolation. Why, might you ask, a HAM 8 display mode if the palette is limited to 4096 colours? The answer is that HAM8 virtually eliminates the fringing effect of standard HAM. Note: My software is V 2.03. I have heard that earlier software lacks the AGA support.

permitting a choice of colour or monochrome and manual, remotely actuated (via joystick) or automated variably timed grabs. The latter is for time lapse and animation purposes.

A MIX control window allows reformatting of images between various display modes. An EDIT window offers a dozen basic image processing functions plus cutting and pasting portions of images. Finally, a CAROUSEL window enables you to store a series of images in memory where they may be arranged, deleted, viewed or played back as an animation. The images are represented as numbered thumbnail images in the carousel window.

Images may be saved as ILBM, 12 bit, or 24 bit files.

There is no provision for colour balancing and the image processing capability is pretty basic with no control over thresholds, degree of intensity or

other parameters. Your control is limited to Do It, Don't Do It, and Undo It. If you have proper image processing software you won't bother with this part.

The results speak

So, at the bottom line, how good is the Vidi-Amiga 12? In my opinion it's pretty damn good. Using a Hi 8 source the resolution is not quite as good as the original but appears to be better than a standard Video 8 or VHS image. With a good image, colour and contrast are excellent, but poorly lit or overly contrasty images are hopeless. The shadowed areas go to black and the highlights burn out. Even cranking up the manual luma gain adjustment all the way won't bring out shadow detail.

Getting the black, white and colour adjustments right in the grab control window is essential for a good grab. The effect of the B&W adjustments can

Your Amiga on a Big Screen

By the way, along with the Vidi-Amiga 12 I ordered an Amiga video to SCART cable. The poor Brits apparently can't afford real monitors so they use this which costs about \$20. It permits you to use a SCART equipped TV as an RGB monitor. The results

on my JVC TV is every bit as good as a 1084 monitor but on a 72 cm (28 in) screen. Awesome! Of course the TV cost two grand which would also buy a pretty impressive monitor, but I already had the TV.

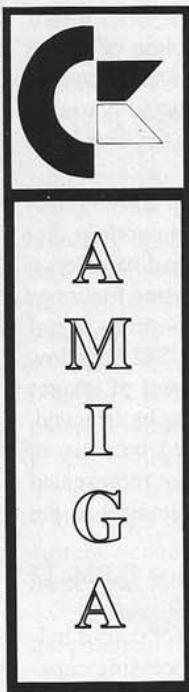
be seen on the monochrome image appearing on the same screen. A good monochrome image = a good scan. The colour adjustment is harder but generally requires less tweaking - the default setting is usually satisfactory. The only way to tell is by trial and error. Do a scan and see. As a scan doesn't take forever this is not too painful.

4096 colours adequately reproduces most images, but with colourful scenes you may run out of palette, resulting in

noticeable colour contouring rather than even shading. This becomes most apparent in skin tones and the sky.

At its best some of the images I have digitised look better than the original video. Overall the Vidi-Amiga 12 gives better results and is far easier to use than my previous digitiser. Bring on the Vidi-Amiga 24. Checking out the accompanying images will let you judge for yourself. □

If you feel lost, helpless and confused, Just follow this signpost!

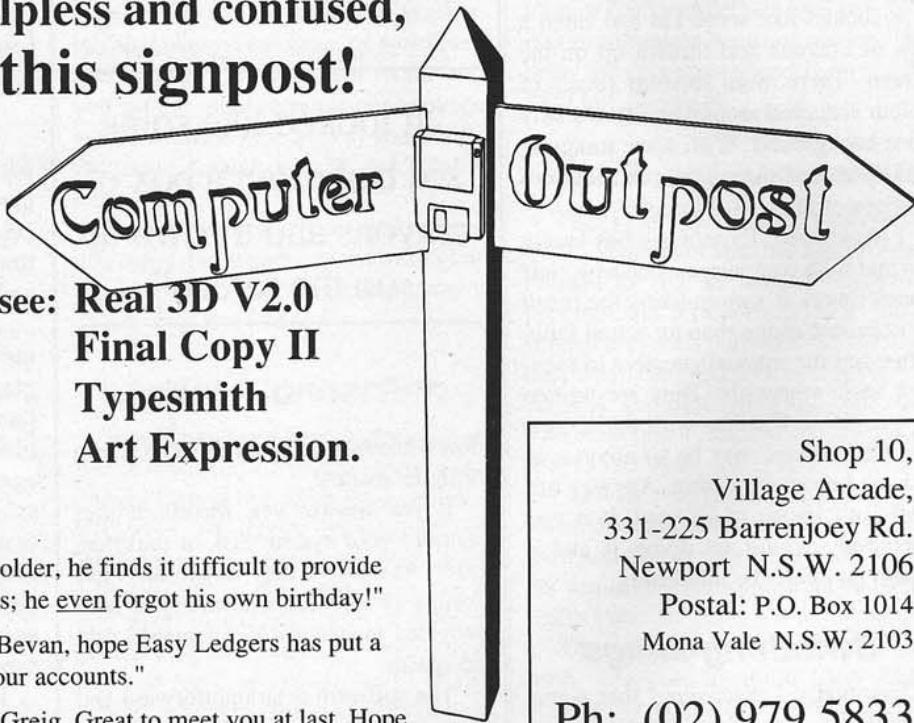


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Update: Final Copy II

Barry Caudle reviews an important update to Final Copy II - one of the leading Amiga WYSIWYG wordprocessors.

Final Copy II has been improved. The new release has a number of significant new features. These include A3 and A5 page sizes for easy setup of odd sized documents, landscape printing, Adobe Type 1 font support, automatic font downloading during Postscript printing and Compugraphic font support for dot matrix compatible printers and improved Workbench 2.x compatibility.

Improved printing

The new landscape or sideways printing option is defined in the Project/Page Setup menu. Landscape printing rotates the output 90 degrees so lines of text print down the page instead of across. This is ideal for reports, or small booklets.

To set up a page for landscape printing the custom button is used and the Width (which must be greater than 20.3cm) and Height values of the paper are swapped. The print area margins also need to be changed to reflect the new orientation of the paper.

Adobe Type 1 font support

Previous versions of *Final Copy* only supported its own proprietary NimbusQ font technology. The Release II font engine also supports Adobe Postscript Type 1 fonts, which are widely available, and come in many typefaces. Loading Type 1 fonts is quite simple - the *Final Copy* font requester allows the selection of any volume and/or drawer for fonts. So, you can keep your

Type 1 fonts anywhere you like.

There is a small delay while a Type 1 font is loaded into the font engine, but then there is no difference in speed between it and other types of fonts. Any point size up to the maximum supported by *Final Copy* may be used.

The quality of the printed output on a dot matrix printer is the same regardless of whether NimbusQ or Type-1 fonts are used or even mixed in a document. This is great news for dot matrix users, since *Final Copy*'s printed output is already about as good as you can get.

Automatic Postscript font downloading

Automatic font downloading is a new feature when Postscript printing. If you have NimbusQ or Type-1 fonts in your document which are not on your Postscript printer, these fonts will be automatically downloaded when the document

is printed.

This feature also applies when Postscript printing a document to a file. Be warned when printing to a Postscript file - I had one non-standard font and ended up with a 90k file for a document which was only two lines long.

One of the benefits of printing to a file is that you can easily take or modem it to an output bureau.

Compugraphic font support

The font engine in *Final Copy* now supports Compugraphic fonts, but with a number of prerequisites and a limitation or two. The prerequisites are you must be using Workbench 2.1 or greater and you must be using a hard disk. If you intend outputting your document to a Postscript device, you can't use Compugraphic fonts.

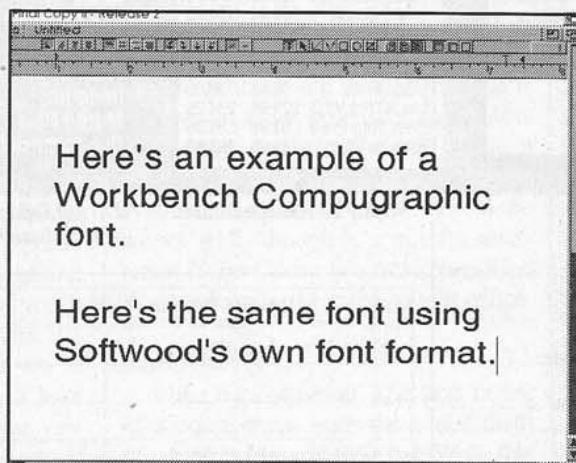
The Compugraphic fonts have to be in Workbench format. Speed is similar to a Type-1 font after the initial load of the font into the font engine. The quality of printing is the same on a dot matrix printer for this type of font as a Type-1 or NimbusQ font or any mixture of the three types.

In Softwood's literature on the new release they make some strong points against Commodore's decision to go with the Compugraphic standard and use these to justify the fact *Final Copy* does not offer Postscript support. Strangely enough, desktop publishing programs like *PageStream* and *Professional Page* have no problem outputting Compugraphic fonts to Postscript and indeed we've had no trouble sourcing them or converting Adobe Type 1's to Compugraphic format.

Conclusions

Final Copy II Release 1 was only released in October 1992 and already Release II is available. This is rapid development and indicates a strong future for this program. The new features work well and further strengthen an already good word processor.

Review copy from Amadeus Computers (02) 652 2712. Distributed by Tupsoft (02) 482 7040.





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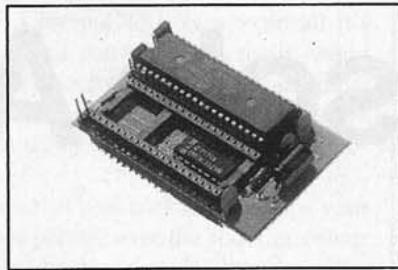
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Amiga Games Console At Last!

by Andrew Farrell

When Amiga was designed, it was meant to be the ultimate games machine. Eight years later, Commodore are launching an Amiga that is just that ... and a whole lot more.

For three years we've lamented the success of Sega and Nintendo, for one good reason. They've been hurting the Amiga. Now Commodore are fighting back with the release of a hot new Amiga based games console. Commodore are convinced they can win back the low-end market for home computer entertainment. How?

Amiga CD 32

Sure, it plays Amiga games. But it does a lot more. The device appears to be based around a cut-down Amiga 1200, with the addition of a CD-ROM drive. Like CDTV, it plays CDs and CD+G discs. Like CDTV, you can happily run interactive multimedia titles. However, the extra kick this baby has also makes it very suitable for fast action games using CD storage and sound plus AGA graphics.

Amiga CD 32 could have easily been designed by Sega. Thankfully it wasn't,

although Commodore are said to be planning on licensing the technology to other manufacturers.

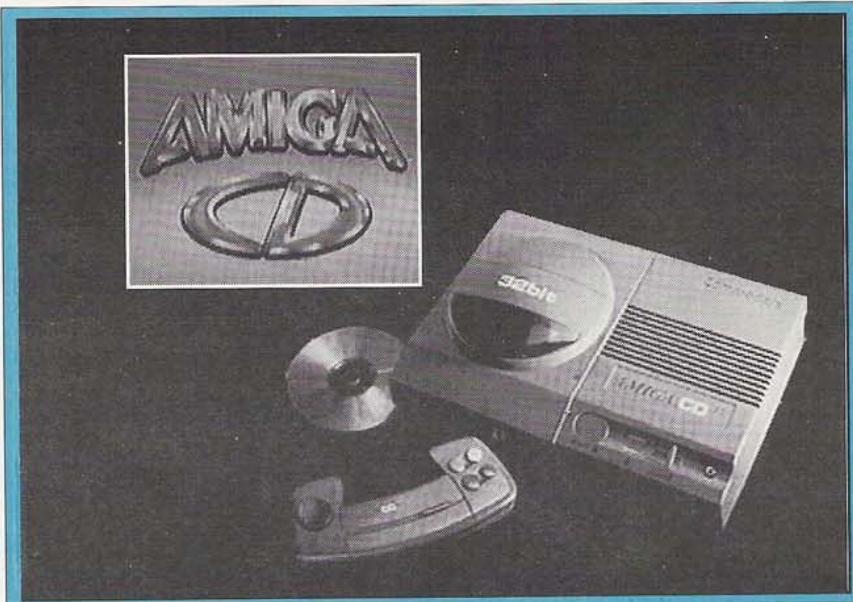
Discs are loaded by opening a simple hinged lid on top of the unit. There's no clumsy caddy or awkward cartridge slots. The hand controller is attached by a long cable to a standard joystick connector. There's only a handful of buttons and simple rocker style joy control button. It's adequate, but no doubt third party replacements will sell well.

The console connects directly to a

composite or S-VHS monitor, as well as into the usual aerial socket of your TV. The stereo sound connectors plug into your hi-fi. There is no RGB connector.

Disc Titles

Commodore promise a major entertainment title will be ready to ship at the machine's official launch later this month. Indeed, developers have known about CD 32 for some time. A few let it



slip in advertising and manuals on a number of occasions. So, it's not surprising that Commodore expect to have 17 other Amiga CD 32 titles available too when the console is released. How many of these will be true AGA quality remains to be seen.

My guess would be that only a handful really use the machine to its full potential initially. Perhaps we will also see improvement on older CDTV titles to take advantage of the new machine's extra speed and colour. Interestingly, the September launch date in Australia coincides with the arrival of the new hit movie *Jurassic Park*.

Expandability

In late '93, an MPEG Video-Module will be released. This will add the capability of playing more than 70 minutes of video from disc. According to Commodore the AMIGA CD32-Full-Motion-Videomodule offers 1:1 TV quality at 30 frames per second. Sure sounds

impressive. Time Warner plan to have a number of titles for the video module's release with many more to follow. Goodbye video disc, hello Video CD.

Amiga CD 32 will one day dock with an external unit to allow full computer functionality. When this will happen is difficult to tell. An additional 2Mb of RAM can be added - however this will also require the expansion box. So, as it stands today, the console is a 2Mb machine. Since the CD drive is one of the new double speed models, memory is not as so critical.

In the short term we may also see some kind of keyboard add on. The high speed Aux connector that makes this possible will also handle a virtual reality glove. Did I hear the word Nintendo?

Opinion

Simplicity and elegance. I'm pretty excited about Amiga CD 32. Although this is essentially the CDTV II that's

World Exclusive

been rumoured for so long, it's certainly not a CDTV style device. Amiga CD 32 is a games console through and through.

This is Commodore's immediate future. Given the wave of interest in multimedia based machines and the continued growth of the low-end entertainment market, they may well have a winner on their hands - if consumers don't mind paying the higher price of around \$500-\$600.

Commodore International has trimmed back and prepared for action. They've dropped the PC range and gone all out Amiga. This is it. Commodore are declaring war against the competition - competition that will no doubt promise a mighty battle. May the best machine win ... Today Sega, tomorrow IBM! □



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How to get Perfect Sounds

H. Wynen shows us how to achieve better results when sound digitising.

The quality of compact disc sound reproduction is close to perfect. So it's no wonder that developers of computers and computer related peripherals have tried to bring this quality standard to their machines.

Although true 16 bit technology, the secret behind the CD's performance, is still somewhat expensive, there are nevertheless already a number of sound boards available for the Amiga (and other computer systems) which offer 16 bit sound to sound enthusiasts with more money to spare.

If the rumours presently doing the rounds are to be believed, it'll be just a few short months before the first Commodore machines equipped with 16 bit sound will start appearing in shops.

In the meantime, let's scrutinise the capabilities of the present Paula chip which has served thousands of Australian Amiga owners for so many years.

Perfect Sound

Computer sound quality is determined by three major factors; frequency response, dynamic range and sampling rate. The first requires that the sound at the output terminals maintains the relative differences in volume levels between all audible frequencies as they are in the input signal, at least within certain tolerances.

The Amiga returns average results in

this category at present - its high frequency response is pretty weak, and this can be rectified with the addition of a Sound Enhancer type treble booster.

The Amiga also has about half the output voltage of normal line level audio sources, so can be a bit of a pain to mix in professional applications. For most users, though, just cranking up the volume suffices.

The scope displays of many sampling programs allow evaluating the recorded signal. From this example it becomes clear why a piano tone of the same fundamental as a basic sine wave of 523 Hz (c') sounds different. Responsible for the audible "distortions" that characterize the piano sound in practice are the number of peaks and dips deforming the pure sine oscillation

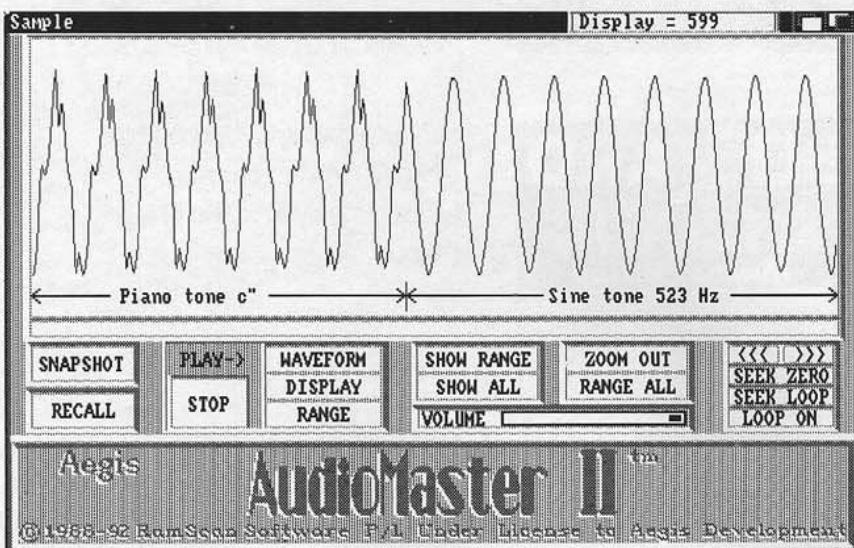
Noise or Music?

There is no question, however, that lower output levels also mean higher noise, which brings us to point two. The Paula chip can provide up to eight bit sounds, which therefore can have up to +/- 128 (256) levels of volume. Compared with analogue (infinite levels) and 16-bit (65,536 levels) sound, this is obviously the Amiga's weakest area of performance.

With eight bits available to describe a signal, the maximum difference between the loudest tone and system noise can be about 48 dB (decibels), which is roughly comparable with a compact cassette recorder without Dolby. In practice Amiga samplers hardly challenge this theoretical limit, with some even finding it difficult to match the 30 dB mark.

This obviously compares badly with the theoretical 96 dB offered by 16-bit computer sound and CDs.

So is eight bit sound more noise than music? Fortunately not, unless you intend to use it for direct-to-(hard) disk recordings of complete events. Standard samples are usually pretty short and



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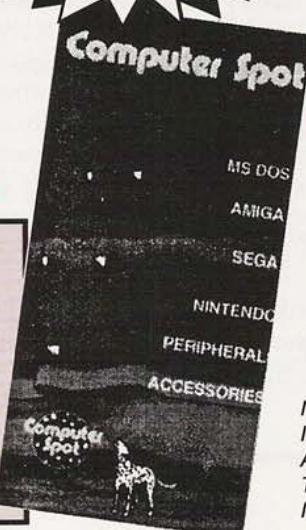
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restricted to a certain sound effect, like a single piano tone.

As long as there are no pauses or extremely quiet passages included, the intended sound will mask any unwanted noise and fool our ears into believing we are hearing a clean and natural sample. Most noise reduction systems built into analogue tape machines also take full advantage of this masking effect and only cut in during the softer parts of the reproduced material.

Building up a soundtrack from eight bit samples can produce high quality results which only experienced ears can tell from 16-bit, provided the samples have been correctly recorded.

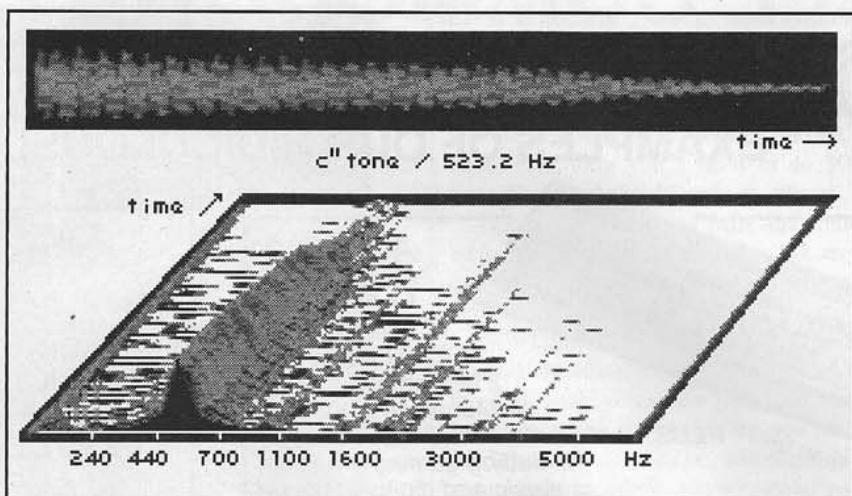
There are two major factors which have to be taken into account during sampling. The recording level adjustment is extremely critical. The input signal available to the sampler needs to be as strong as possible to keep hum, hiss and other noise to a minimum.

At the same time, peaks in the signal have to be kept down to a level where they can't produce saturation distortion. The scope facilities or VU/Peak level meters of some sampling software can be a good aid for achieving the right balance but may, at the same time, be rather confusing for the novice and thus easily lead to poor results.

Under those circumstances it is best to monitor the output signal from the computer via headphones while slowly increasing the record level until audible distortion occurs. After reducing the level again, very carefully, to the point where those distortions have just disappeared, recorded samples will be the best achievable with the equipment used.

This equipment includes the sound source, which should deliver a signal as clean as possible. That not only excludes AM broadcasts, but also FM stereo programs. Most tuners fail to filter out the 19 kHz pilot tone completely, resulting in nasty whistling tones produced by interference with the sampling frequency.

Even the hiss of cassette recorders may lead to some interference products, as can low quality, noisy microphone amplifiers.



This analysis of a ca. 500 Hz piano tone reveals a variety of frequency products (harmonics) up to almost 5000 Hz, which caused the distortions in picture 1. A good recording of this sound should therefore be sampled at a minimum rate of 10 kHz for natural results

Sampling it Right

The sampling rate, too, has to be chosen wisely. In contrast to the vast differences in dynamic range between eight and 16 bit sampling, both systems are equal here. The sampling rate, which sets how often per second the volume of the incoming signal is determined, should be at least twice the highest frequency that needs to be recorded.

Compact discs are produced with a sampling rate of 44.1 kHz, which allows for a frequency response to about 20 kHz. To achieve CD quality you therefore have to record 16-bit samples at 44.1 kHz. Unfortunately the resulting files are huge and thus unusable in many non-professional applications.

Using the eight bit format already halves that size without necessarily compromising quality too much, as mentioned above. If the sampling rate too is brought down to suit the task, some very manageable sample sizes can be produced with perfectly acceptable sound quality.

For example, a piano is capable of covering a tonal range from about 25 to 4,000 Hz, with overtones and harmonics extending to 7000 Hz. A sampling

rate of around 15,000 Hz would therefore be sufficient under many circumstances for sampling even the highest piano key, cutting the file size by more than half. The human (female) voice extends to around 10 kHz, while applause is as demanding as the triangle in a symphony orchestra with over 17,000 Hz and consequently would best be served by the CD sampling rate of 44.1 kHz if disk space allows.

Conclusion

As you can see, the current Amiga sound hardware is perfectly capable of producing high quality eight bit samples for use in sequencers and similar programs. 16-bit sound boards, presently only available from independent peripheral producers, become a must when direct-to-disk recordings of complete performances are intended or for extended samples with a high dynamic range.

If the basic rules concerning recording levels and sampling rates are followed, there is no reason why a home user should delay the purchase of one of the world's best computers just to wait for 16-bit sound. □

A Quick Intro to Desktop Video

H. Wynen tells how even a standard Amiga can be an invaluable tool in the production of exciting video footage when certain rules are followed.

It is hardly a secret that the Amiga is widely regarded as the most flexible, if not the BEST personal computer overall when it comes to multimedia applications, specifically in the area of video processing or manipulation.

The competition may have managed to catch up quite dangerously in recent times, but the latest AGA machines go a long way towards re-establishing Commodore's leading position in the fast growing field of desktop video - DTV.

Unfortunately, DTV is instantly associated with oddly named, expensive peripherals and software like video "Toasters" and "Roasters", 24-bit frame grabbers, "Art Departments" or media presentation systems reminding us of grand Italian opera stages.

As a consequence, it's easy to miss the fact that the Amiga is capable of providing great home video editing effects without having to mortgage said home. In fact, for a single five dollar note, or even less, public domain suppliers like Prime Artifax can provide disks filled with a wide choice of fonts and programs to produce professional looking titles and scene transitions without the need for any additional equipment.

Unfortunately, older Amigas have only a monochrome composite video output, so if you own one you'll have to live without colour in your presentations. If greyscale sounds a little too limiting for you, though it can give some excellent results, Commodore's TV adaptor A520 (picture 1) will provide full colour for around \$50.

The A520 is an essential accessory if you don't own an Amiga 1200 or better and don't want to invest in a genlock. The reason is simple.

Inferior Video

A composite video signal, as used in VCRs and home television sets, is far inferior to the RGB system employed in computer monitors. Sharpness and colour registration/saturation visibly suffer in a standard TV picture when compared with its computer counterpart, and video noise reduces the achievable quality even further.

To avoid later disappointment, it's therefore strongly advisable to ignore the crisp monitor picture when creating titles and/or graphics to be recorded onto

video tape. Instead it's best to hook up a television set or your monitor, if it has composite or Y/C (S-VHS/Hi8) inputs like Commodore's 1084S, to the outputs of the recording VCR.

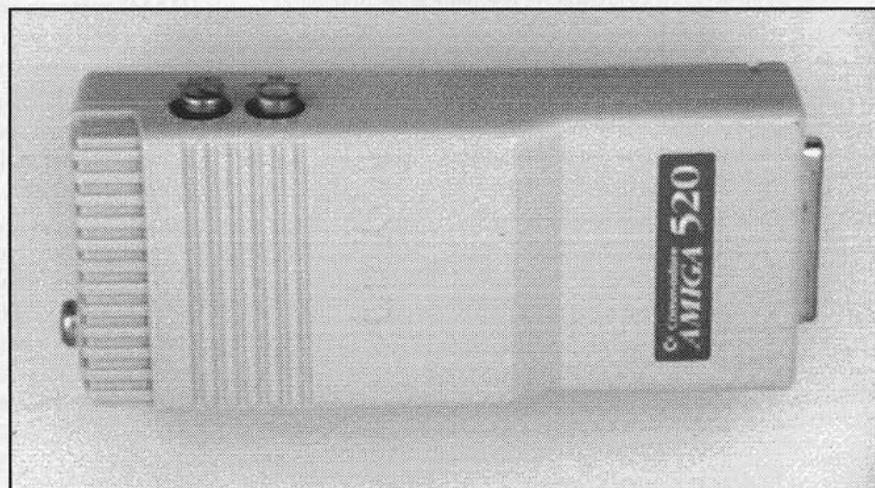
One word of advice is in order here. If you intend to get an A520 for video transfers, try to compare two or three units in the shop in an actual setup. You may be surprised at the difference in performance.

As the A520 performs a conversion of the computer's RGB signal into composite video, instead of a simple amplification, internal adjustments at the time of manufacture are quite critical and can easily be knocked off their optimum settings during transport to the end user.

There is also that eternal question of how well a manufacturer's quality control is implemented in practice. If reading standard Amiga text appears difficult because of excessive blur, or colours in graphics tend to bleed out of their boundaries, try another model. Although you can't expect monitor performance, well calibrated A520s are perfectly capable of delivering performance up to the standard required for more demanding, serious video productions.

As already mentioned, composite video is highly susceptible to colour bleeding and noise. Reduce the level of

Picture 1: For owners of older Amigas, Commodore's TV adaptor A 520 is the easiest and cheapest way of recording colour titles and/or graphics onto video tape



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bleeding or ragged, pulsating colours until they stay inside their intended boundaries, by lowering colour intensity.

If the results are still not completely satisfactory, use a dark outline around letters or put the whole title in black boxes. A dark background swallows the flare caused by bleeding. In case you want to save your creations for repeated future use, make sure to reserve colour zero exclusively for the general background in all your graphics. Should you ever decide to obtain a genlock for more sophisticated video effects, those graphics could then still be used.

Colour Zero

In contrast to audio, any composite video signal contains synchronization pulses which make it impossible to mix two or more such signals unless all the pulses are perfectly in sync with each other. Devices to achieve that synchronization are called genlocks.

In the case of mixing computer signals with live video, the genlock has to perform an additional task to allow the overlaying of titles. It removes the background colour (makes it transparent) so the video behind the computer graphic is not obstructed from view in all areas occupied by that colour.

In most affordable genlocks the transparent colour is fixed as colour zero, the first in the palette, which should therefore not be used unless it is specifically intended to have the video picture coming through in that location. A future article will take a more in depth look at specific genlock applications like keying effects and white balance correction.

Fades and Wipes

Many titling programs, commercial or public domain, allow the scaling and distortion of fonts and the application of shadow effects (picture 2). Scrolling and wipe or fade transitions between pages are also quite common. In many cases it is possible to replace the plain background with an IFF graphic, often included in the transition effects or even equipped with their own, independent set of wipes.

Some may find it disappointing that Hold And Modify (HAM) pictures normally don't like being put behind titles, as they come very close in appearance to live video. However, video tends to smooth over sharp colour borders so even many digitized 32 colour and some monochrome 16 shade frame grabs can look quite adequate.

Many faults and shortcomings clearly visible on a monitor screen will simply disappear when run on a television set, especially if they were recorded to tape first (picture 3). When creating graphics for inclusion as a backdrop, it is always a good idea to keep some spare colours, e.g. using only 12 from the 16 available in the palette. The ones left may then be freely chosen and varied for titles without affecting the graphic. This is especially important when using digitised images which often contain very few or no pure colours at all, making it very difficult to achieve sufficient contrast to make the title stand out from the surroundings.



Picture 3: Although mono reproduction somewhat hides the differences, it is still obvious in this comparison that the losses caused by the recording to video tape in fact created a more natural look in the shadowed areas around the model's mouth and along the arm

Conclusion

With a genlock only required for putting graphics and/or titles over live video, every stock Amiga can be used for creating exciting visual effects to be recorded with a VCR.

If the creations are in full colour, it is preferable to judge their impact on a standard television set instead of the much sharper monitor screen. This helps

to avoid the most commonly made mistake of creating oversaturated colours the composite video standard can't handle.

Apart from this basic rule, only your individual creativity can be held responsible for the success or failure of your own video productions.

R***

Picture 2: In contrast to the A 520, a genlock allows replacing the background (colour 0) with live video. Titles with different fonts and effects can be created even by cheap or completely free non-commercial software, as in this example



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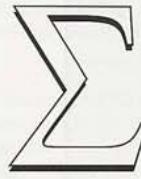


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HyperCache Professional

by Daniel Rutter

Anybody who's played with AmigaOS will have noticed the AddBuffers command. It uses system RAM to make disk storage faster, by adding a number of RAM "buffers" to a device. Anything read from a device goes into that buffer, and if it's needed again it can be recalled from the buffer without accessing the disk. The more buffers you have, the further back this read history can go and the faster your floppy or hard drive seems to be.

But there's a lot more that can be done in software to accelerate disk devices. You can do prefetch, where blocks on either side of the one being read are read at the same time and buffered, so in the likely event that something near to the previous data is needed it'll already be waiting in the buffer. And with clever coding you can make sure that the system's most frequently used data stays in the cache while less desirable information is allowed to be replaced.

Until recently, there's only been one reliable cache program, *SmartDisk*. *SmartDisk* has some limitations, but it also has the great advantage of being public domain - free.

But now there's a choice, with local availability of *HyperCache Professional*, a program which does all *SmartDisk* does and more, for \$80.

But first, the cheap option. *SmartDisk* is available on Fish 754, from any good Amiga PD outlet. Its author, David Le Blanc, has released it into the public domain, so you need not register it or send anybody any money except what you pay for the disk it comes on. Tech-

nically, it's an '8-Way set associative' cache, with 8 sets, lines of 4 sectors with prefetch, and 32 lines. This adds up to $32 \times 4 \times 8 \times 512 = 524288$ bytes or 512 kilobytes of RAM used and sectors are 'prefetched' four at a time.

SmartDisk is simple to run - you just stick its name in your startup-sequence or user-startup with the name of your controller's device - so, for example, GVP users would use `gvpbsci.device` - and the unit number of the drive to be cached, and suddenly your drive is faster.

SmartDisk is not configurable - you tell it the device to cache, it gloms half a meg of RAM and you're in business. Its

major limitation is that it can't support multiple physical devices on one controller - if you have two or more hard drives running off the one controller and you use *SmartDisk* you're asking for a crash as it gets confused about which disk to talk to. Multiple partitions on one drive are okay, though, so for most users *SmartDisk* will be fine.

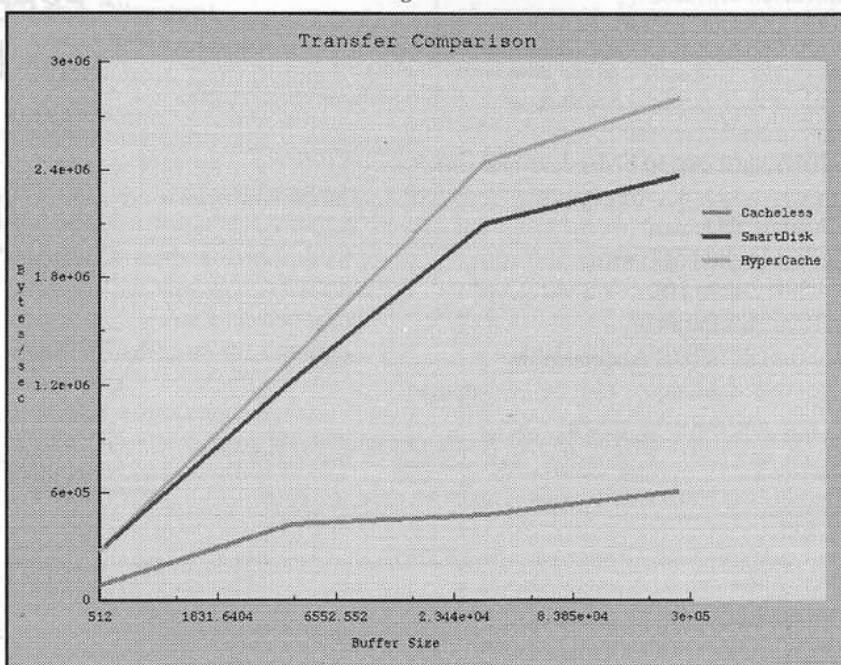
SmartDisk also can't cache floppies; not a terrible problem for most hard disk users, but something of a pain to the majority of Amiga owners, who still don't have a hard disk.

HyperCache, on the other hand, will cache as many devices on one controller as you like, but you have to start a new cache for each of them, which can be a real memory drain. This doesn't make *HyperCache* useless for people with less memory, though - it can provide useful acceleration even on a 512k floppy based machine. But the more RAM you feed it and the faster your processor is, the faster the end result will be.

HyperCache can also cache floppies, or indeed just about any disk storage device at all - any flavour of hard drive, floptical disks, removable hard drives, CD-ROMS, whatever.

As Figure 1 shows, both *HyperCache*

Figure 1



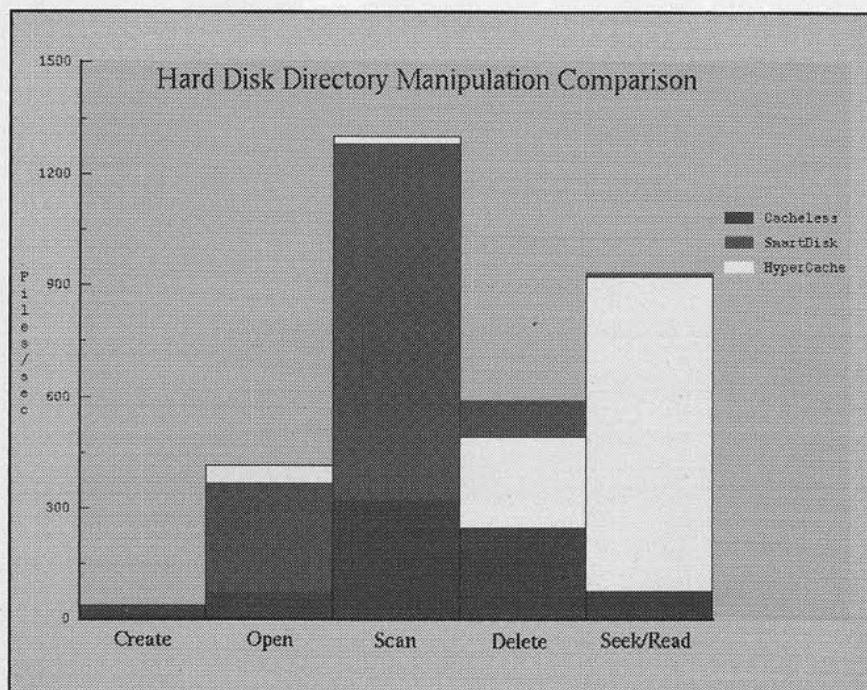


Figure 2

and *SmartDisk* are way faster than *Addbuffers* alone, with *HyperCache*'s slightly better design putting it a shade further ahead. The test machine is running a Maxtor 200Mb SCSI drive and has a 40MHz 68030 CPU, and 30 regular buffers were used on the drive. *HyperCache* was used with its default configuration, which is exactly the same as *SmartDisk*'s. The file create, read and write scores were averaged - file read is always much faster than the other two figures on cached systems.

Figure 2 shows that in directory manipulation, *HyperCache* wins on file open and scan, and *SmartDisk* beats it on file deletion and by a small margin in seek-read. File creation isn't significantly helped by either cache, but in every other department the caches beat regular buffers by miles.

And on floppies, *HyperCache* really shines. The test, as administered by DiskSpeed 4.2, is biased in favour of prefetching caches so your mileage will vary, but the difference will still be noticeable. I used a full 512k cache on the floppy, which is overkill, but give a good idea of the ceiling performance - which is a LONG way up on what we're used to!

In fact, the results for data transfer from floppies were too different to graph. While file create and write speeds were increased by only 10% or so, file reads went through the roof, thanks to all the data being prefetched into the

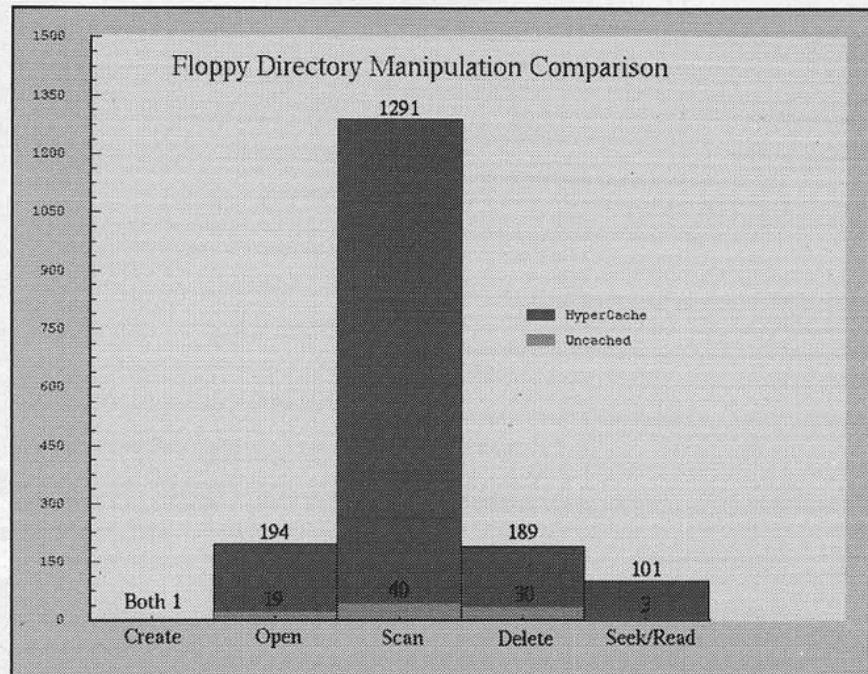
cache and read operations never really touching the floppy itself at all. The best read figure, for the 256k cache, was more than 1.2 megabytes per second - compared with about 21 KILOBYTES without the cache!

A more meaningful figure came from the directory scan, as shown in Figure 3. Again, the test is slanted for *HyperCache* and the cache is bigger than most people would use, but you can see that even if you only get a quarter of the speed you're still a long way ahead on everything except, as usual, file creation.

So who will use *SmartDisk*? People with more than one hard disk on their controller. People who want fast floppies. Power users with big processors - *HyperCache* could have been MADE for A4000 owners, stuck with relatively slow IDE hard disks but with gigantic CPUs. And at only \$80 from Amadeus Computers, it's not a major purchase.

If, however, you just want a simple cache for a single hard drive and want to save your money, do check out *SmartDisk*. 10% less performance for less than a tenth of the price isn't a bad deal at all. □

Figure 3



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Tigers once ranged all the way from China to Turkey, but today their range is largely confined to India and South-east Asia, with smaller populations in China, Siberia and Turkestan.

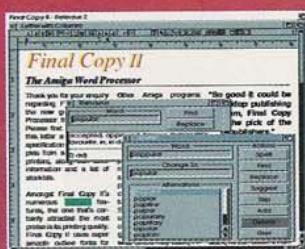
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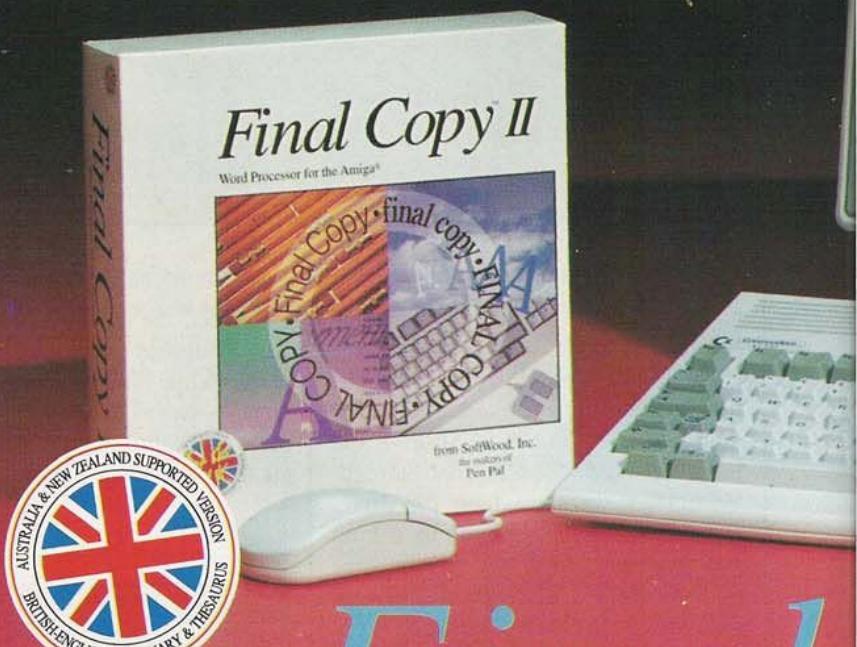


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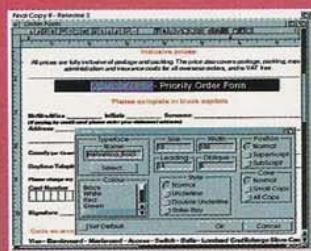
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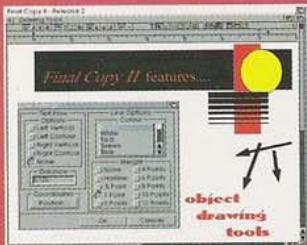
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	PostScript Font Outlines on all Printers	NO	YES
	Maximum Number of PostScript Fonts	Limited to a total of 35	Infinate
	Download Extra Fonts to PostScript Printer	NO, Can't download extra fonts	YES, Automatic
	Landscape (Sideways) Printing on all Printers	NO	YES, Automatic
	Reclaim Printing Resolution (Quality) of Scaled (Reduced and Enlarged) Graphic Images	NO	YES, Same High Quality when Reduced and Enlarged
	Print any Text or Graphic in Colour	YES	YES
	No. of Colours Printed in Imported Pictures	Limited by Screen Mode Used	Output as Original Image
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Graphics	Text Width (Compress and Expand)	NO	YES
	Variable Text Obliquing (Slanted Text)	NO	YES
	Both Positive and Negative Attributes	NO	YES
	Box, Rounded Box, Circle, Oval, Line, Variable Border & Arrow Drawing Tools	NO	YES
	Crop (Trim) to Size Imported Graphics	NO	YES
	Supports A1200/4000 AGA Chipset	YES, 256 On-Screen Colours	YES, 256 On-Screen Colours
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	On-Screen Maths (Column Addition)	NO	YES
	Import ASCII Text from any Word Processor	YES	YES
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Education

The New Improved Australian Graphics Atlas

by Stan Nirenberg

Australian Graphics *Atlas* has now made it to version 3.5. In the process, it has grown bigger and better, this time offering many of the modules that were previously available separately. *Graphics Atlas* is a set of maps, photographs and statistical information about Australia and Antarctica that can be accessed from the screen of an Amiga.

This is a big program - it requires at least 1 Mbyte of RAM and two floppy disk drives to operate, although a hard disk is extremely beneficial, as is additional RAM. The program is delivered in compressed form on seven floppies. It requires almost 9 MByte of hard disk space or 14 floppy disks when decompressed to its final useable state. The whole package is enclosed in a handsome plastic folder and comes with a comprehensive 33 page manual.

Installation

Before using the *Atlas*, the program must be installed onto either a hard drive (the preferred destination) or a number of floppy disks. A very user friendly installation program is included to take care of this task and a readme file on the main program disk explains what is involved.

The installation program has three lev-

CORRECTION

In the July Issue of ACAR I incorrectly gave the price of *Back to Basics* as \$39.95. It should have been \$55. Sorry about the confusion.

els of settings to suit rank beginners as well as the expert Amiga user who may want to customise his or her installation. The user has the option of installing onto a hard drive or floppy disks. In addition, the installation program allows the user to make a dry run (ie, goes through the motions of installing) before committing *Atlas* to disk, and online help is available if any questions come to mind.

For those who do not have a hard disk, a set of colourful labels has been provided to stick onto the floppy disks for easy identification. However, be warned that a fair amount of disk swapping will be required to operate in this mode.

Up and Running

As it comes, *Atlas* is extremely easy to use. Although it is based on

AmigaVision as its display engine, it comes prepackaged with a runtime version which allows the user to simply double click on an icon and *Atlas* is off and running. *Atlas* may also be operated from *AmigaVision* (purchased separately) which then allows the user to modify the way *Atlas* is viewed.

Navigating within the program itself could not be simpler. The user is given a set of selection boxes which are activated by the mouse to bring up the desired screens of information. The instructions provided are more than adequate to guide any level of user, and it doesn't take long to become proficient at running *Atlas*.

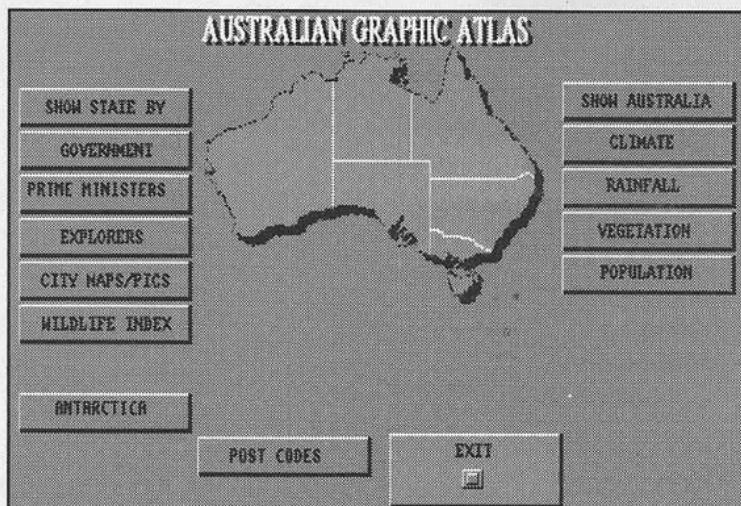
Atlas is not copy protected, and it multitasks in an Amiga with sufficient memory.

This is useful if you want to write an assignment in the background or if you want to capture screen images for inclusion in your assignment.

Features

Atlas is, as the name suggests, a pictorial atlas of Australia. It offers the ability to view Australia the continent and individual states along many dimensions. Not only can you obtain standard geographical information such as land relief, land use, national parks, capital city maps and climatic information, but a lot of historical information is also provided. Amongst the information presented is a set of scanned photographs relevant to the topic under investigation and this includes scenes from Antarctica (landscapes, ani-

Main selection screen



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- CycleMan for Imagine
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- Your Family Tree
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mals, bases), highlights from each of the capital cities and pictures of various native plants and animals.

The following information is available:

- State maps showing relief, land use and National Parks
- Members of Parliament (Senate and House of Representatives)
- Explorers of Australia, including routes travelled by, pictures of and biographical information about the explorers
- City maps and pictures, including street maps of capital cities
- A wildlife index of some 32 Australian animals, including pictures and information
- Climatic and rainfall information about each State
- Vegetation types and their distribution by state
- Population statistics, including historic growth trends from early settlement.

The additional modules that have been included with *Atlas* are:

- Antarctica, which shows information about the landscape, climate, wildlife and explorers
- Prime Ministers, which provides a complete listing of Australia's Prime Ministers since Federation, their term of office, pictures and biographical and historical notes. Photographs of parliament have been provided as well as floor plans and seating arrangements in both chambers
- A Postcode Utility

Apart from the Postcode utility, the other modules of *Atlas* provided a wonderful pictorial tutorial of Australia. One of the strong features of *Atlas* is the ability to extract the information in pictorial format for use in written assignments or reports (with the help of a wordprocessor or DTP package) and multimedia presentations; all screens are stored in standard IFF format. In addition, if you own a copy of *AmigaVision* (purchase it with *Atlas*) than you can easily modify the way *Atlas* is presented. This allows *Atlas* to be specifically tailored to meet the required teaching curriculum.

The good, the bad and the unknown

There really is very little to criticise about *Australian Graphic Atlas*, and the benefits certainly outweigh any small shortcomings.



Scanned photographs are included - Ayers Rock

Again, I must reiterate that this is a big program and therefore is best run on an Amiga with two or more Megs of RAM and a hard drive (although it will operate on a machine with at least 1 Meg of RAM and two floppies). Even with a hard drive, the going can be slow at times. However, the wait is more than offset by the quality of the presentation.

All the pictorial material, including drawings and photographs, is excellent, limited only, perhaps, by the Amiga's low resolution in HAM mode. The choice of pictures was such that display resolution does not seriously impair what is seen on the screen. Hopefully, a subsequent version of *Atlas* will take advantage of the new Amiga chip set (1200 and 4000 Amigas).

As with any software that provides demographic, statistical or political information, currency is always an issue. *Atlas* V3.5 is very new and most of the information is up to date. Being an Australian product, support in the form of updated information should always be available.

I want to raise the issue of using the elements of *Atlas* in presentations. The size of the package is so large, that I found it difficult without assistance to find where the pictures I wanted to use were located. In fact, I found it easier to use a screen capture program to grab the images for this article than to copy the desired image files. I think that a future edition of the handbook should give a

listing of the files that are provided and where they may be found.

The only disappointing part of the program was the Postcodes utility. It did not seem to want to carry out all the search and sort functions that it is supposedly capable of. However, it was still possible to extract postcodes of any postal centre in Australia.

Summary

Australian Graphics Atlas is a great product that can be used in schools and in the home. It provides an interesting approach to learning about Australian geography and history. Its strongest point is the ability to modify the way *Atlas* is presented (through *AmigaVision*) as well as the providing a source of material for written and multimedia presentations. In

FACT FILE

Title: *Australian Graphics Atlas* V3.5 (with Antarctica, Post Codes, Prime Ministers)

Publisher: HC Software Pty Ltd, (08) 262 4461

Distributor: HC Software Pty Ltd

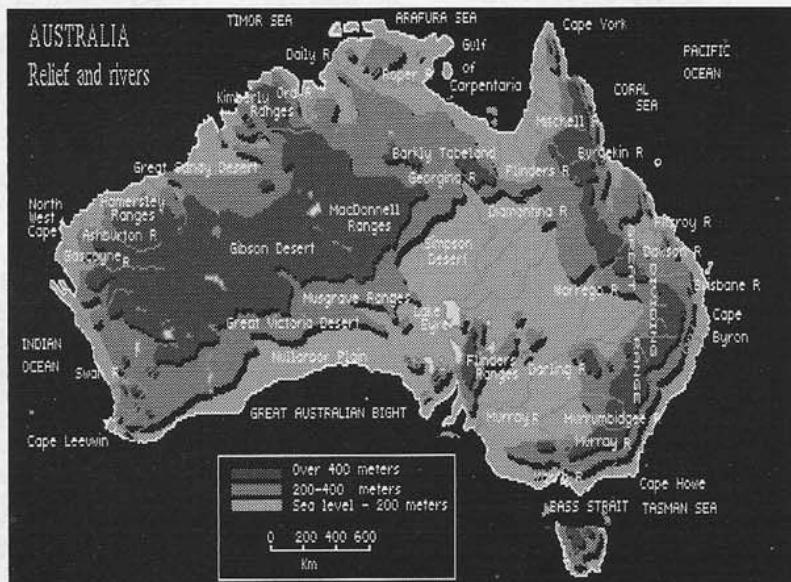
RRP: \$89.95

Category: Geography

Comments: Colourful introduction to Australian geography and more!

Age Group: 7+

Rating: ****



Land relief and rivers

addition, it is one of only a few products that has an exclusively Australian perspective. And we must not overlook the fact that because AGA is Australian made, full expert local support will be available.

Other products

HC Software, the maker of *Australian Graphics Atlas*, has also available the following products: *Antarctica* with run time, *Australian Postcodes* with runtime, *Demographics* with runtime, *Journey Through a Cell*, *Record Manager*, *NapGAP*.

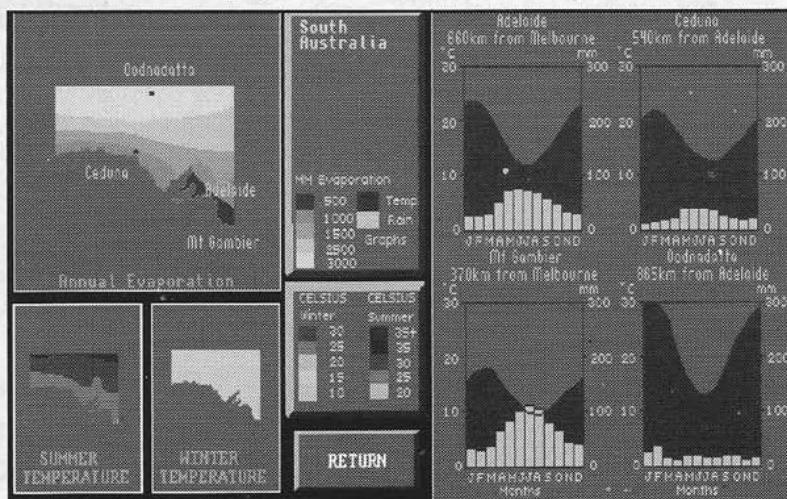
Note that some of these are available as Lab Packs for use in schools. In addition, a floptical version of *Atlas* is available and for those people with IBM compatible computers, a Windows version may be purchased. New products in the pipeline include *Pacific Islands* and *Atlas of the Solar System* (sounds great!).

HC Software may be contacted by phone on (08) 262 4461 and Fax on (08) 262 8229. Their address is PO Box 782, Prospect East, SA, 5082.

Reader feedback

As usual, please write in with your comments, questions, etc to me care of ACAR or directly to PO Box 136, Forest Hill, Vic 3131.

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You Can CanDo Quick Shots

Greg Abernethy continues his regular guide to using CanDo, an object orientated language for writing your own Amiga applications.

For a change this month I designed three small programs as tutorials. The programs are a Communications program shell, a Printer Utility and a Speech Utility, but due to lack of space the Speech Utility will appear next month. I wanted to see how useful the ParallelManager and SerialManager really were, and also to have some way of finding a suitable voice for some of the educational software I was designing.

The Communications program is simply a way of talking to a modem and receiving information back from the modem. There is no error-checking or attempt to interpret what is being returned from the modem, but I thought it was worthwhile as someone may develop it into a CanDo communications package.

The Printer Utility allows you to select exactly how you want a file to be printed as in ELITE, UNDERLINED, CONDENSED, ITALIC, NLQ or ENLARGED.

Designing the Communications Shell

The specifications for the window are:

```
WINDOW NAME "QuickComm..."  
WINDOW SPECIFICATIONS  
X POSITION = 0 : Y POSITION = 0  
WIDTH = 640 : HEIGHT = 256  
NUMBER OF COLOURS = 4  
DRAG-BAR GADGET  
WINDOW FRONT-BACK GADGET  
WINDOW OPTIONS  
THE WINDOW HAS VISIBLE BORDERS TRY TO  
OPEN WINDOW ON WORKBENCH
```

```
CARD SPECIFICATIONS  
CARD NAME "Comms"
```

```
BEFOREATTACHMENT SCRIPT  
ListenTo "Incoming"  
SpeakTo "Serial#0"  
IfError  
  Dos "run >NIL: <NIL: c:SerialManager -tIncoming  
-pHello"  
  Let TimeOut = 50 ; MAX timeout  
  Loop  
    Delay 0,0,10  
    SpeakTo "Serial#0"  
    IfError  
      Let FoundSerialPort = FALSE  
    Else  
      Let FoundSerialPort = TRUE  
    EndIf  
    Let TimeOut = TimeOut - 1  
  Until FoundSerialPort OR (TimeOut = 0)  
Else  
  Let FoundSerialPort = TRUE  
EndIf  
If FoundSerialPort  
  SendMessage "SetConfig F8N12400"  
Else  
  SetWindowTitle "Major BOO BOO!"  
  Quit  
EndIf
```

Explanation:

Firstly, make sure you have the SerialManager file in your c: directory. This script sets up our communications ports. The ListenTo port is called Incoming and the SpeakTo port is "Serial#0" which is the default port for sending messages via the Serial Port.

When a message comes from the modem we have an ARexx object called "Incoming" which is used as our receiver for the message. When a message is received the script associated with that object is performed.

If the SerialManager is not already loaded, the script will loop until either the SerialManager is loaded or the script TimesOut, in which case you will see a message in the WindowTitle. The main

reasons for the SerialManager not loading is that the SerialManager file is not in your c: directory or the Serial Port is in use.

If everything is okay, I tell the SerialManager to set its configuration to F8N12400. This is interpreted as FULL DUPLEX, 8 BITS, NO PARITY, 1 STOP BIT and 2400 BAUD RATE. I know very little about modem communications so I can't explain the details except to say that the configuration is standard for most communication programs.

Creating Send and Receive documents

When communicating via a modem, you need some way of sending and receiving messages. I decided to do two documents, one for typing messages to send and one for receiving messages from the modem. The specifications are:

Receive Document Specifications

```
DOCUMENT OBJECT NAME "ReceiveDoc"  
DOCUMENT NAME "Receive"  
DOCUMENT TYPE Memo Document NO TYPING  
DOCUMENT ORIGIN X = 8 : Y = 13  
DOCUMENT SIZE Width = 623 : Height = 120  
BORDER Double Bevel  
SEND DOCUMENT SPECIFICATIONS  
DOCUMENT OBJECT NAME "SendDoc"  
DOCUMENT NAME "Send"  
DOCUMENT TYPE Memo Document  
DOCUMENT ORIGIN X = 8 : Y = 155  
DOCUMENT SIZE Width = 623 : Height = 91  
BORDER Double Bevel  
NO SCRIPTS
```

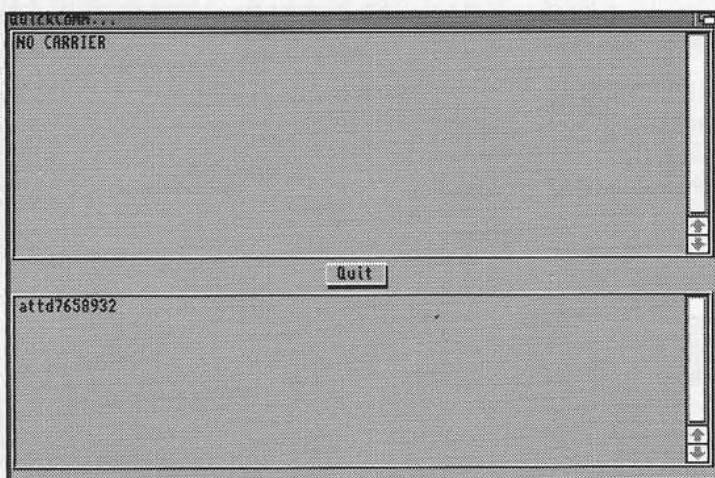
Once the documents are created, the next thing to do is to create the ARexx object for receiving incoming messages from the modem. The specifications for the ARexx object are;

AREXX OBJECT SPECIFICATIONS

```
OBJECT NAME "Incoming"  
MESSAGE TO WAIT FOR "Hello"  
Occurred Script  
WorkWithDocument "Receive"  
Type TheMessage,NEWLINE
```

Explanation:

When a message is received from the modem it is typed into the RECEIVE



Communications program

document. The MESSAGE TO WAIT FOR is "Hello" which is the prefix the SerialManager is using to tell you that it has received a message.

Therefore, when a message is received from the modem, it prefixes the message with "Hello" and the "Incoming" ARexx Object is alerted that a message has arrived. It checks the prefix to see if it is the one it is expecting and then performs the script.

This allows you to have multiple ARexx objects listening for messages. You could apply it to a network with multiple serial ports. Your application would handle the messages coming in and then take the appropriate action.

Next, we need to be able to send messages to the modem. To do this we create a KeyInput object to wait for the RETURN key to be pressed, which indicates that the user has entered a line of text in the Send Document and pressed RETURN.

KEYINPUT OBJECT SPECIFICATIONS

```
NAME      = "Sendit"
QUALIFIER = NONE
KEY CODE  = RETURN
RELEASED Script
WorkWithDocument "Send"
Let L = TheLine
NewLine
SpeakTo "Serial#0"
SendMessage "Send"|||TrimString(L),NORESULTS
```

Explanation:

Although this script is rather rough, it performs the function of easily being

able to get text messages from a document. When the user presses RETURN instead of the cursor moving to the next line, the KEYINPUT object intercepts the key press and performs the script.

The current line is trimmed of any leading or trailing spaces and then sent to the modem. The NORESULTS option is set otherwise the application will hang waiting for a message from the modem, which will not happen. It is necessary to do a NEWLINE as the KeyInput object has prevented this from happening.

Lastly, we need to be able to leave the program after freeing the Serial Port.

QUIT BUTTON SPECIFICATIONS

```
Button Name = "Go"
Horizontal = 287 Vertical = 138
Border     = DOUBLEBEVEL
```

```
Button Type = "Text"
Button Text = "Quit"
Script
SpeakTo "Serial#0"
SendMessage "Send Quit",NORESULTS
Quit
```

Explanation:

A message is sent to the SerialManager telling it to shut down, and then the program quits.

This is a very rough application but hopefully someone may use it as a shell for a communications program.

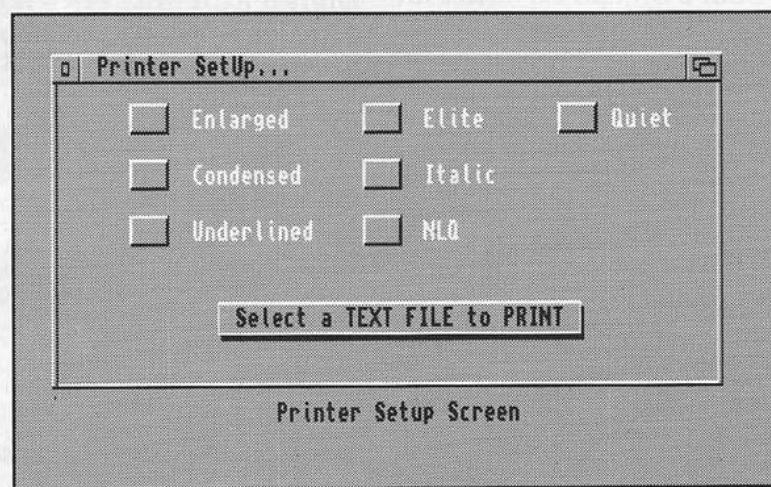
Designing the Printer Utility

The specifications for the window are:

```
WINDOW NAME      "Printer SetUp..."
WINDOW SPECIFICATIONS
X POSITION = 100 : Y POSITION = 30
WIDTH = 440 : HEIGHT = 120
NUMBER OF COLOURS = 4
DRAG-BAR GADGET
WINDOW CLOSE GADGET
WINDOW FRONT-BACK GADGET
```

```
WINDOW OPTIONS
THE WINDOW HAS VISIBLE BORDERS TRY TO
OPEN WINDOW ON WORKBENCH
CARD SPECIFICATIONS
CARD NAME      "Print"
AFTERATTACHMENT SCRIPT
SetPen 2
PrintText "Enlarged",92,20
PrintText "Condensed",92,40
PrintText "Underlined",92,60
PrintText "Elite",244,20
PrintText "Italic",244,40
PrintText "NLQ",244,60
PrintText "Quiet",368,20
Let enlarged = 0
Let condensed = 0
```

Printer Utility



```

Let under = 0
Let elite = 0
Let italic = 0
Let NLQ = 0
Let quiet = 0

```

Explanation:

When the application loads, text labelling the buttons is printed and the print option variables are all set to zero.

Print Option Buttons Specifications

There are seven option buttons and a print button for this card.

ENLARGED BUTTON SPECIFICATIONS

```

Button Name = "Enlarged"
Horizontal = 51 Vertical = 18
Width = 25 Height = 11
Border = CHECK
Button Type = "Area"
Script
If enlarged = 0
  Let enlarged = 1
  SetObjectState "Enlarged",ON
Else

```

```

Let enlarged = 0
SetObjectState "Enlarged",OFF
EndIf

```

Explanation:

This script toggles the option on and off, and checks or clears the button.

The Option Buttons are identical with the exception of the Horizontal and Vertical positions and parts of the script. To save space I will give the coordinates for each button.

Also, to change each script simply substitute the name of the variable and name for that button. For example, the Elite Button Script is:

```

If elite = 0
  Let elite = 1
  SetObjectState "Elite",ON
Else
  Let elite = 0
  SetObjectState "Elite",OFF
End

```

If The Coordinates for each button are;

CONDENSED H = 51 : V = 38

UNDERLINED	H = 51 : V = 58
ELITE	H = 204 : V = 18
ITALIC	H = 204 : V = 38
NLQ	H = 204 : V = 58
QUIET	H = 332 : V = 18

PRINT BUTTON SPECIFICATIONS

```

Button Name = "PrintIt"
Horizontal = 110 Vertical = 90
Border = SHADOW
Button Type = "Text"
Button Text = "SELECT a TEXT FILE to PRINT"
Script
Let File = AskForFileName("sys:","Select FILE to
PRINT...","150,35)
If FileOf(File) = ""
  ExitScript
Else
  MakeDocument "Work"
  WorkWithDocument "Work"
  LoadDocument File,"Work"
EndIf

```

Dos "run >NIL: c:ParallelManager"
Delay 0,1,0 ; Give the ParallelManager time to
LOAD
SpeakTo "Parallel#0"
SendMessage "SetByteMode HEX",NORESULTS
If enlarged = 1

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```

SendMessage "Send 1B 57 01",NORESULTS
Else
  SendMessage "Send 1B 57 00",NORESULTS
Endif
If condensed = 1
  SendMessage "Send 0F",NORESULTS
Else
  SendMessage "Send 12",NORESULTS
Endif
If under = 1
  SendMessage "Send 1B 2D 01",NORESULTS
Else
  SendMessage "Send 1B 2D 00",NORESULTS
Endif
If elite = 1
  SendMessage "Send 1B 4D",NORESULTS
Else
  SendMessage "Send 1B 50",NORESULTS
Endif
If italic = 1
  SendMessage "Send 1B 34",NORESULTS
Else
  SendMessage "Send 1B 35",NORESULTS
Endif
If NLQ = 1
  SendMessage "Send 1B 78 01",NORESULTS
Else
  SendMessage "Send 1B 78 00",NORESULTS
Endif
If quiet = 1

```

```

SendMessage "Send 1B 73 01",NORESULTS
Else
  SendMessage "Send 1B 73 00",NORESULTS
Endif
  SendMessage "SetByteMode CHARACTER",
  NORESULTS
  Let L = LinesInDocument
  If L > 0
    Let x = 0
    Loop
      Let x = x + 1
      PositionOnLine x
      SendMessage "Send"||TheLine,NORESULTS
      Until x = L
    Endif
  SendMessage "SetByteMode CHARACTER",
  NORESULTS
  SendMessage "Quit",NORESULTS

```

Explanation:

Firstly, make sure you have the ParallelManager file in your c: directory.

A requester is used to find the text file to be printed. The file is loaded into the "Work" Document. The ParallelManager is loaded, a delay being used in case it hasn't loaded when

we try to speak to it.

Next, the option variables are checked and if they are ONE, a message is sent to the Printer telling it to set use the option. This is done by setting BYTEMODE to HEXADECIMAL and then sending the HEXADECIMAL printer code for that option. You can add other options, such as Superscript or Subscript, as your printer manual has all the HEX printer codes for various printer options.

When the options have been sent, BYTEMODE is set to CHARACTER and then the document is sent to the printer line by line. Finally, the ParallelManager is shutdown to free up the memory it was using. I have not added the FORM FEED message as it would depend on the application. Test this yourself to see which suits your needs. This utility could be very useful for creating a wordprocessor.

See you next month. □

Part 2 next month - the Speech Utility.

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Deluxe Paint Tutorial

Floating Baubles

Deluxe Paint guru, Graham Bowden, shows us more uses for the amazing animbrush.

If you missed either of the last couple of *Deluxe Paint* tutorials, now would be a good time to beg, borrow or steal the relevant copy/copies of ACARs past, for the information contained therein will be indispensable in following this month's instructions.

There were a couple of animation tricks mentioned in those articles I didn't have room to explain. Well, times change and space becomes a relatively elastic medium when a new issue of ACAR is being assembled, so we'll continue where we left off.

Animated ...

One of the effects left hanging was a rotating cube with animated sides. Dear and gentle readers, once the technique of cube construction has been conquered, employing an animbrush to assemble an animated animation is a snap (*That'll do - Ed*). Even - or in fact especially - for an amateur animator with an Amiga (*This is your last warning - Ed*). The seed to the secret was planted last month with the orbiting dice where the original rotating dice, picked up as an animbrush, was itself animated.

The fact is that any brush type - Built-in, Custom or Animbrush - can be mobilised using *Deluxe Paint*'s Move requester. With this in mind then, why not form the faces of a cube with conveniently sized animations? Why not indeed, and Figure 1 shows several different animbrushes which were used for just that purpose.

Step by step

Before the cube construction started, a 50 by 50 pixel filled square was drawn to serve as the standard cube face. Then from the Anim menu the number of animation frames was set to 36 before importing the first animbrush which just happened to be the funky dice we created last month. Unfortunately though the very size of this animbrush caused a wee problem. You see the brush as loaded, was too large to fit comfortably into that nominal 50 x 50 pixel cube size. Hhmm.

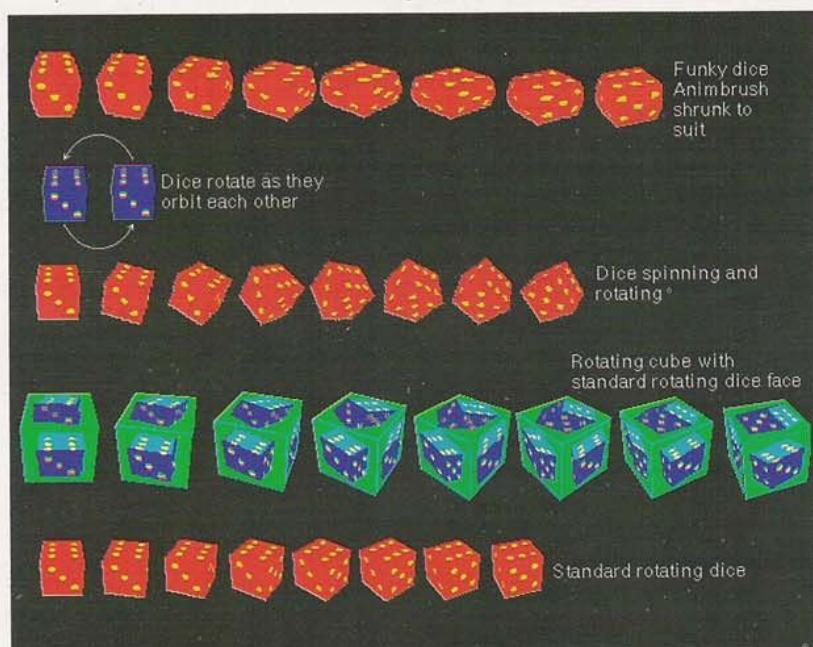
Have you ever tried to shrink an

animbrush? Both a Built-in or normal custom brush can be shrunk using either the “-” (minus) key or “h” key for small or large increments respectively. Try this with an animbrush however and *DPaint* confronts us with the message “Can't apply this transformation to AnimBrush” which translated means “Nick off, you can't shrink an AnimBrush”. And that, dear and delicate *DPainters*, is pure bovine excreta!

It's really quite simple. Enter Perspective mode and position the animbrush directly over Perspective Centre. That's over the cross hairs in the centre of the screen. Start pressing keyboard “‘” (apostrophe - adjacent to the Enter key). This has the effect of moving the brush away into the distance - shrinking it. Once the brush is the required size, stamp it down then press <Shift>-7 (that's keyboard 7) to return the animbrush to Cel One.

Call up the Move requester, make sure the Dist: and Angle: boxes are all set to zero and the Count: box is set to 36 (remember we have 36 frames of animation set and the animbrush happens to also be 36 cels) then click Draw. Because Perspective is still selected the brush will be drawn down over the frames at its reduced size. It remains

Figure 1



AMIGA 4000



No Problem

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now only to pick up a new, smaller, animbrush. The same sequence can be used to enlarge a brush. Just use the ";" (semicolon) key in place of the apostrophe.

The first animated dice face can now be created by bouncing the funky dice around the 50 x 50 square.

Anim painting ...

The twin revolving dice below the funky dice in Figure 1 are another simple animation effect. The original die we created a couple of months back was a 36 cel brush. With this in mind, load that die as the current animbrush, call up the Spacing requester (Shift-v or right mouse button click over the Vector tool), select "N Total" and enter 72 in the adjacent box. We're going to use this setting to animpaint a circle.

Animpainting, as with last month's animfilling routine, involves the use of the left Alt key. Select the "circle" tool, hold down the left Alt key and draw out the circle to the desired size. When the mouse button is released an animated circle will be drawn down over 72 frames (the selected spacing number).

Ah, it's good to see some of you are on the ball (the cube?) and noticed that

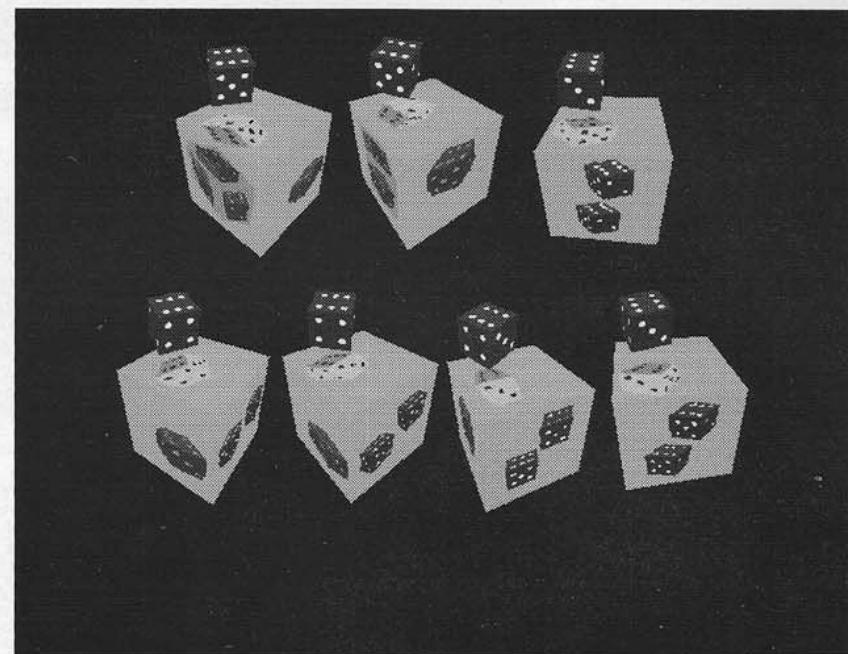


Figure 2

we only have 36 frames of animation on which to draw. But that you see, is the beauty of it. We end up with a pair of dice rotating about each other and this Gemini set can be picked up as an animbrush, shrunk to the desired size if required and used as the second side of our mobile dice bauble.

The spinning and rotating dice was produced by simply rotating the original dice animbrush through 360 degrees on the "Z" axis with the Cyclic box in the Move requester ticked or if you like, active. Finally the dice in dice animbrush is itself a cube using the standard dice in all its faces.

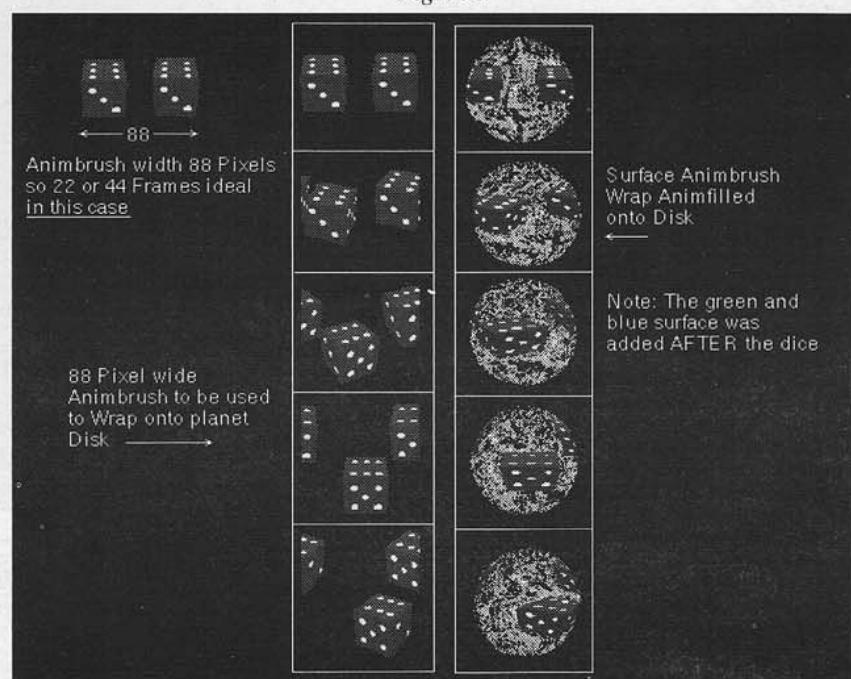
Having thus created the five animbrushes in Figure 1, each one was used within a 50 x 50 pixel square over 36 frames. That left five new animbrushes each 50 x 50 ready to be picked up and used in the construction of an animated rotating cube. Figure 2 has a few selected frames of my um, er, blockbuster. Yes, well.

Double trouble

What of the pair of rotating dice forming the simulated surface of a spinning planet? A mouthful that one, which I shall deal with but briefly this month, as I soon hope to discuss the animating of spinning planets and moons covering even the day/night shadows appearing upon the surfaces. Next month perhaps.

For now, load the double dice animbrush which was constructed using the Animpainted circle routine discussed above. Hit Shift-7 to ensure the

Figure 3



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brush is currently in Cel One and stamp it down. Use the co-ordinates in the top right of the menu bar to find the width of this brush. For the purposes of this description only, let's say the brush was 88 pixels wide as in Figure 3 and was of 36 Cels duration.

Clear the screen and set up 36 frames of animation, then stamp the brush down somewhere in the middle of frame one. Press Shift-7 to return to Cel One of the animbrush, call up the Move requester and enter 88 into the "X" Dist: box. With 36 in the Count: box click Draw.

When *DPaint* has finished its activity recall the Move requester, click "Go Back" then select the right hand arrow from under the Direction: Move dialogue and again click Draw. When this is finished press keyboard 4 to view the animation which should in fact be a double double dice animation moving 88 pixels from left to right across the screen. Press the space bar to stop the animation.

Now! Press Shift-1 to return to anim frame one, select Animbrush/Pickup from the Anim menu and carefully box in the two dice on screen, remembering to go far enough above and below them to allow for their orbital movement between frames. When the mouse button is released ensure that the requester which appears is set to 36 and click OK. You now have a new animbrush which can be used to Wrap fill a filled circle.

Clear all frames of the animation, then draw a filled circle about 50mm in diameter. Copy this circle to all frames, then select "Wrap" from the Fill Type requester. Engage the Fill tool and hold down the left Alt key to animfill the circle with your moving, rotating dice animbrush. In my example in Figure 3 the dice also have a background of land and sea over which they appear to move. □

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The C64 Column

by Owen James

1541 Source

Following my comments in the June edition regarding the availability of new 1541 disk drives, a few readers have recently informed me that The Gamesmen may have a few units in stock. For up-to-date information contact The Gamesmen directly on (02) 580 9888 or fax (02) 580 9998.

PD Update

Public domain software can be a great way to source low cost reasonable quality software for your C64. Each month I've been looking at some of the newer titles from Brunswick Publications.

Brunswick Disk #163 - Home Accounts

Home Accounts is a collection of small yet useful programs for calculating household budgets and assisting in making financial decisions. Included is a utility for calculating total interest, duration of debts on credit cards, a name and address database and label printer, a program to assist in the compilation of taxation records and an easy to use calendar maker.

One of the larger and most useful programs on this disk is *Budget V2*. Use this program to enter income and expenses for desired categories to get an overall view of your finances throughout the year, month or week. An income/expense comparison graph can be generated from your data and details can be saved for later recall. Certainly a very worthwhile program, making the

disk attractive for this program alone.

As usual, thanks must go to Brunswick Publications for the continuing supply of public domain software for review. Brunswick tells me they are constantly obtaining new titles from Australia and overseas, so if you haven't seen Brunswick's catalogue for a while, now might be the time to do so. To receive the latest catalogue on disk, send a cheque or money order for \$5.00 to Brunswick Publications, PO Box 458, Bondi Junction NSW 2022. We'll be looking at more of Brunswick's latest titles next month.

MAIL

Repair Dilemma!

Travis Baylis, of Bendigo Vic, writes:

"Dear Owen, I am writing to warn C64 users about Excelerator Plus disk drives. Many years ago I bought an Excelerator Plus for my C64. Around 1991 it began acting up. It wasn't loading properly. Some games would load, but most wouldn't. I took it in to be serviced, but was told it was okay. I took it somewhere else, and was told it would be a chip in the computer. But with that replaced, it still wouldn't work, even with a different computer. It must be the disk drive, mustn't it? I can't really afford a new drive.

"The drive is currently being serviced again. When I took it in, I was told nothing could be done, and it hadn't even been looked at! I was told they were too hard to fix, but they'd have a look anyway. Any suggestions?

"I have some other questions to ask:

i) Can the C64 automatically boot a disk when you put it in the drive? Can you program it to autoboot, but keep your program in memory even if the computer is turned off - and just press a key to end the program if you want to use basic?

ii) Can you improve the 64's memory, but cheaply? If not, what are the other prices?

iii) If my drive gets fixed, I've considered getting a copy of *GEOS*. Something that will give me word processors, graphics programs, databases, etc. What programs will give these, and how much are they?"

OJ: The Excelerator Plus drives were for many years a popular and less expensive alternative to the 1541's. Unfortunately, the quality of these units was not consistent. Many have written to me with complaints about them, but just as many have written with nothing but praise. I have personally used an Excelerator Plus for six years, and it has only recently shown signs of wear. And as with all of my computer equipment, it's certainly had a hard working life. Without knowing specific details of the problems, there's not a great deal I can suggest. As with all computer equipment, it's always best to get it serviced by someone that specialises in that type of equipment. If possible, take it to a Commodore Authorised Service Centre (there are several around).

The only practical way to boost the C64's memory these days is with CMD's lineup. As these units are battery backed they will also provide a way of retaining software in 'memory' even after you power-down. They can be used to store software in the same way as a disk, but the advantage being that recall is almost instantaneous. On the downside, however, these units are very expensive, especially when compared to the cost of a new Amiga 600.

GEOS is certainly an excellent choice for productive C64 use. As standard, it includes a powerful word processor with spell-check, a graphics program and a good selection of utilities. There's still a good selection of *GEOS* add-on applications, including a spreadsheet, data-

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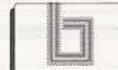
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base, desktop publisher and more. However, *GEOS* works best when used with a mouse, which are unfortunately extremely difficult to get hold of in Australia. *GEOS* is still very usable with a joystick.

GEOS has a recommended retail price of \$79.00, but many retailers are offering it for far less. Code One Computer Services (tel or fax (047) 57 3982) currently has it for \$62.00.

For Sale

Bill Fife of Blacktown NSW writes:

"I'm writing this letter hoping you can put my ad in your C64 column soon. I've had a 64 since about 1985, but for the last ten months I've been using an Amiga, so the software for the 64 is for sale.

"A treasure trove for C64ers! 95 disks starting from 50 cents each, as well as a datasette with head alignment kit and 29 games for \$60.00. Disk games include public domain, printing programs, general games and business software as

well. Please write for a comprehensive list on all of the software. First in, best dressed!

"There's software here that you can't find anymore, so collectors will like it, I'm sure. The software is offered on a sale basis only. I'm not interested in swapping."

OJ: If you're interested, contact Bill directly by writing to 21 Lyton Street, Blacktown NSW 2148.

C64 Software Supply

Kevin Picone, from a group known as 'Underware Design' (very cute, guys), writes:

"Dear Owen, I'm writing to you after reading a letter in the May 1993 issue of ACAR. A reader brought up the point that the 64 needs a face lift, which is correct. But he seems to forget that CBM updated the 64 many years ago, which of course was the CBM 128.

"There is no questioning that the CBM 128 was the logical step up from the 64 range of 8-bit machines and was

created, in my opinion, so that the 64 could be phased out. But as we all know, this never happened. The 128 died from a lack of 128 mode software thus not giving those people with 64s enough reason to update. This is similar to the current Amiga 1200 crisis with all those A500/600 users waiting to see how good the 1200 software is before they upgrade. (What crisis? Commodore can't make enough of them! - Ed.)

"So what can you do about the lack of software being published for the C64 and 128?

"a) Buy more software! If everyone bought one game every two months or so this may push retailers into keeping more stock through the greater demand.

"b) Contact companies direct to voice your interest in your machine. This may lead to more of the new games being released for your machine. It can't hurt!

"c) Form or join a PD based user group since there's a lot more strength in numbers. With 9-10 million 64/128s out there in the world you should be

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able to make someone sit up and take notice.

d) Programmers, use your talents! It's no secret that most 64 coders are or were crackers, so why not give something back after all you've taken. Cross the line and turn a love into a business and start making games.

"It all seems so simple, well on paper at least. I wish you all the best of luck and may the 64 and 128 go on for many years to come."

OJ: Some interesting points there. It was certainly a shame that the 128 died prematurely, but it was just a case of very bad timing. Shortly after the 128 was announced Commodore acquired the Amiga company, and so the spotlight shifted from the 128 and it just didn't receive the promotion it needed.

Regarding the Amiga 1200, there's no question of its continued success. They're selling fast, receiving reasonable promotion, and already there's been quite a stunning amount of productivity, and even more surprising, public

domain software, written to take advantage of its AGA chipset. There's no turning back now; The A500, 2000 and even the 3000 has been dropped from production, leaving the AGA-less A600 (now selling for \$399!), the 1200, 4000 and the yet to be announced 'mystery' machine that will most likely plug the gap between the 1200 and 4000. Development for this new breed of Amigas is now inevitable.

The biggest problem the C64 faces at the moment is a lack of software. Not just the release of new titles, but even the older ones are becoming scarce. Many distributors are now selling the last of their C64 stocks, making it increasingly difficult even for retailers that want to continue offering C64 support.

Wanted: Tatts II - Found: Final Cartridge Manual

N. Vernon of Qld writes:

"Dear Owen, I am writing to you regarding a letter that you printed in the April edition of ACAR from S Mackenzi

of Cooma asking for a copy of the Final Cartridge III manual. If you would like to print my name and address in full and if he hasn't been able to get one I will send him an original copy as when I bought mine I got two.

"Is there anybody out there that has got a working copy of *Tatts II*, which is no longer distributed? Also, a working copy of *The Big One*. The one that I have won't let me enter any draws over 1625. If I try, it just comes up with a full screen of machine language and crashes."

OJ: Anyone that's interested in contacting N. Vernon should write to 21 Cornish Street, Bundaberg, Qld 4304.

That wraps up this edition of The C64 Column. As always, I'd love to hear your news, views, questions and comments. Write to me at The C64 Column, PO Box 288, Gladesville NSW 2111. Modem users can once again contact me via Fido Netmail at 3:713/888.999, with thanks to the Sysop of Way Out West BBS, Darren Gibbs. □

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AMOS Column

Do you like TOME? I hate it. As I promised a while ago, here's how to write better games without it.

A long time ago, the illustrious TOME Extension came onto the market boasting its ability to hold 9000 screens of information in 64k of memory, scroll in eight directions and access any given tile. This seems attractive to the person who splashes out the \$80 odd to use it, but in reality TOME won't make you the all new Bitmap Brother Coding legend.

Now don't get me wrong, TOME is a very powerful extension. It does give the ability to create large maps and scroll them easily on the screen. But the question is how well, and the answer is not very.

When you look at games like the average horizontal shoot'em up, the scrolling and movement of the objects are always perfectly smooth. You could stare at it for hours; it looks real. Then take a look at a scrolling TOME screen. It's an eyesore! Jerky, sloppy scrolling and it's definitely not nice to look at.

So what do we do? Remember how I've mentioned the Turbo Extension before? Well that's what we'll use. Please don't think for a moment that this extension will make you the great programmer almighty either. You still have to use your brain and work out a good system of optimising code and making it as short as possible.

Making smooth scrolling in AMOS has changed somewhat since its inception. Because AMOS is just a BASIC, it's still slow. To scroll using the conventional method (copying a large block on the screen, shifting it left, and redrawing a new bar in the black spot), was too slow for the poor little language to handle. So the popular technique was to use hard-

ware scrolling and screen copying. To best illustrate the differences, take a look at the following two examples:

Example 1

In this illustration you can see the following techniques:

1. Setting up a screen twice as long as the viewing area with both halves looking exactly the same.
2. Hardware scrolling the first half out to the left to show the second half.
3. Copying the contents of the second half (the one currently in view) to the first half.
4. Instantly switching the first half back onto the screen into view making it look

as though there was no scroll (both the left and right halves look the same).

5. Draw the new graphics on the right hand side and go back to step 2.

Now, there's a problem here depending on the amount of graphics that are written to the screen. The Amiga has to be able to finish drawing everything before the VBL hits the next frame, otherwise the screen will jerk every now and then.

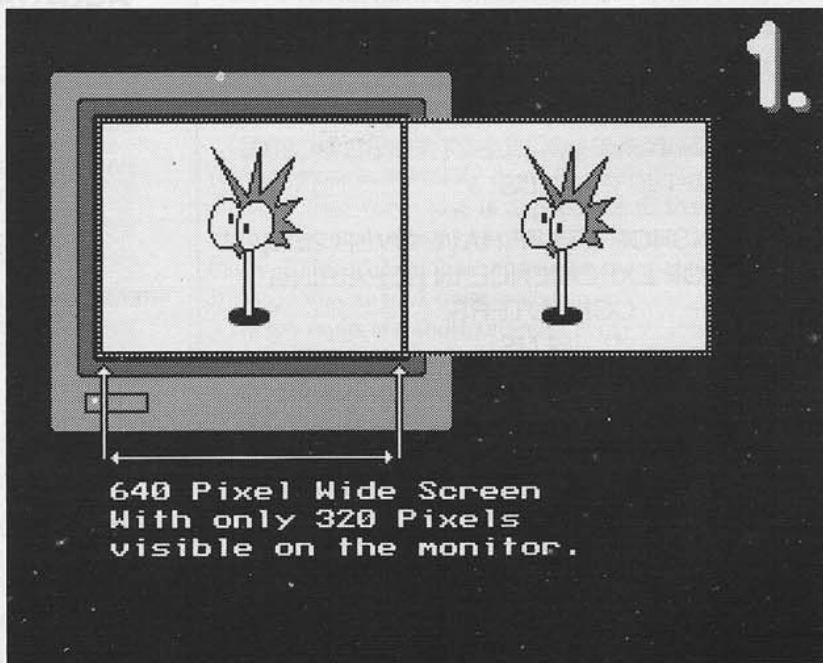
Example 2

Using the Turbo Extension, we define an area to scroll, simply call the command to do the scroll and update the erased graphics that are left behind.

So here comes our program:

```
*****
(0) 'Sausage's NoTOME Map Scroller
(0) ****
(1) Screen Open 0,352,160,16,Lowres
(2) Limit Mouse
(3) Screen Display 0,140,82,320,160
(4) Hide
(5) Flash Off : Curs Off : Cls 0
(6) Get Sprite Palette : No Icon Mask
(7) Global MAP$
(8) MAP
(9) Procedure MAP
(10) MAP$=MAP$+"44444"
(11) MAP$=MAP$+"44444"
(12) MAP$=MAP$+"41114"
(13) MAP$=MAP$+"51115"
(14) MAP$=MAP$+"11111"
```

Figure 1



```

(15) MAP$=MAP$+"11111"
(16) MAP$=MAP$+"41114"
(17) MAP$=MAP$+"43134"
(18) MAP$=MAP$+"43334"
(19) MAP$=MAP$+"34444"
(20) MAP$=MAP$+"43544"
(21) MAP$=MAP$+"44344"
(22) MAP$=MAP$+"44434"
(23) MAP$=MAP$+"44443"
(24) MAP$=MAP$+"44434"
(25) MAP$=MAP$+"42324"
(26) MAP$=MAP$+"53445"
(27) MAP$=MAP$+"34444"
(28) End Proc
(29) Blit Erase 1
(30) Blit Store Left 0,1,0 To 352,160,-4
(31) Wait 50
(32) Multi No
(33) Repeat
(34) Multi Blit 1 To 1
(35) Add M,1,0 To 7
(36) If M=7
(37) Add P,1,1 To 90
(38) Paste Icon 320,0,Val(Mid$(MAP$,P,1))
(39) Add P,1,1 To 90
(40) Paste Icon 320,32,Val(Mid$(MAP$,P,1))
(41) Add P,1,1 To 90

```

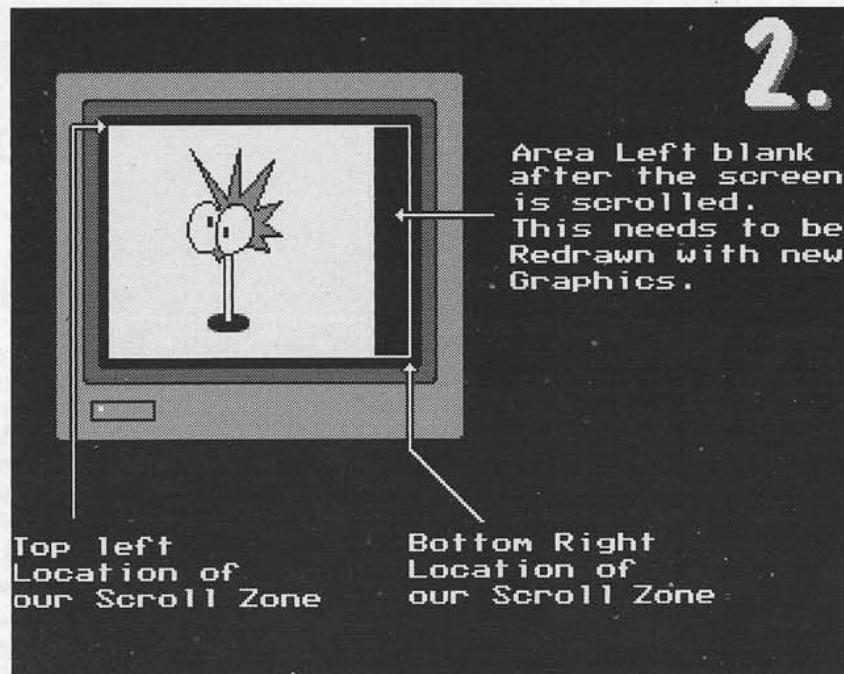


Figure 2

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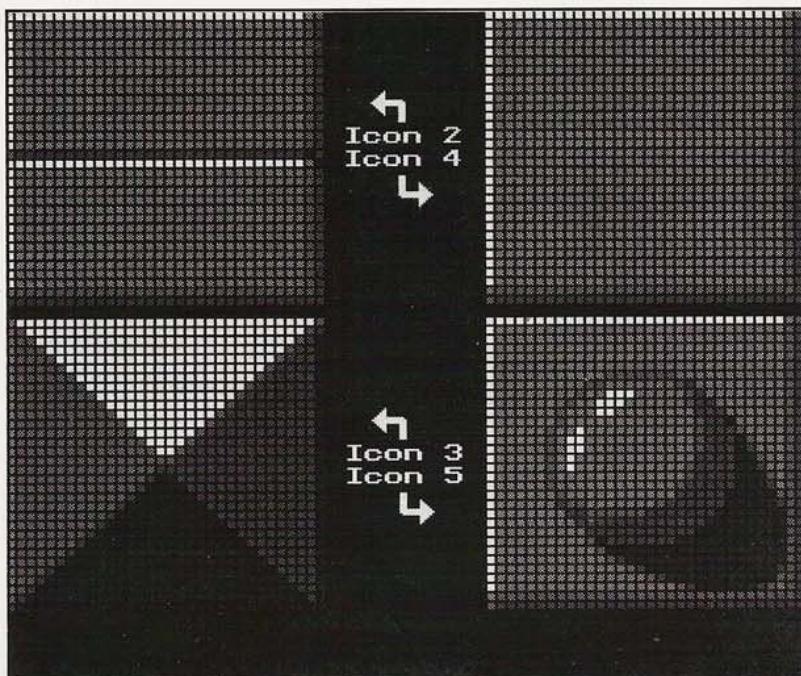


Figure 3 - some blow-ups of my icons

```

(42) Paste Icon 320,64,Val(Mid$(MAP$,P,1))
(43) Add P,1,1 To 90
(44) Paste Icon 320,96,Val(Mid$(MAP$,P,1))
(45) Add P,1,1 To 90
(46) Paste Icon 320,128,Val(Mid$(MAP$,P,1))
(47) End If
(48) Vbl Wait 240
(49) Until Left Click=1
(50) Multi Yes
(51) Blit Erase 1
(52) Edit

```

What we have above is a simple map

scroll system in 50 lines. You should be able to expand or change it for your own games or demos. Anyway, here's a quick run down of what's happening:

(1) to (7) sets up our screens.
(8) calls our MAP procedure.

(9) to (28) is the actual MAP procedure that holds the map data in a string called MAP\$. I've split the string up in lots of 5. This represents each row of icons to be pasted on the right hand side

of the screen. Each number represents the icon number in the icon bank. Simply change the numbers to display the icons how you want them. Also, make the length as long as you wish. So for a level that's 50 screens long you'll need to do 500 lines. Perhaps I should write an editor!

(29) to (30) erase any Blits that could be in memory and set up a new blit area that covers the width of the screen and about half the length.

(32) Turns multitasking off so that our program becomes the only thing active in the Amiga and is therefore faster. Be careful with this command. Unless you have used the Until Left Click, and Multi No commands to break the program, you won't be able to stop your program.

(33) to (49) is our main loop that waits till M=7 before drawing the set of five icons down the right hand side of the screen. Experiment with this value for strange effects.

(50) to (52) reset everything and go back to the editor. One last thing, this code has been written to work with five different icon definitions that are 32 x 32 pixels. Fewer colours are faster and better. You may wish to create your own icons for this tutorial, but this time I've included some blow ups of my icons in Figure 3.

Figure 4 will show you the results you should get after entering the program and creating the five icons in figure 3. Remember that Icon 1 is a blank square. To create the icons, use the Sprite Designer



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and convert them with the Icon_Conv.AMOS program on the AMOS Programs disk or use my converter that was in an earlier issue of the AMOS Column.

Tips for Using NOTOME:

If you find your map jerks now and then, you can try the following:

- Decrease the number of colours used.
- Compile the code to speed up the program and beat the VBL before it starts on a new frame.
- Use one less tile. In our example, I've used 5 32x32 tiles. This is better than 445x45 tiles (size of the tiles affects drawing speed). Even having 9 16x16 tiles is faster. If your machine cannot keep up, reduce the program to 4 32x32 tiles.
- Make sure that you only open a screen of the length required to scroll. In other words, don't open a 256 pixel high screen if you only intend to scroll 100 pixels of it. This wastes blitter time.

News and New Stuff

• Yes it's finally here! The AMOSPro Compiler is now starting to hit the shelves, and is certainly no simple facelift from the original. This compiler has been completely redone. Look out for it at a retailer close to you! A demo is also available from the AMOS Club.

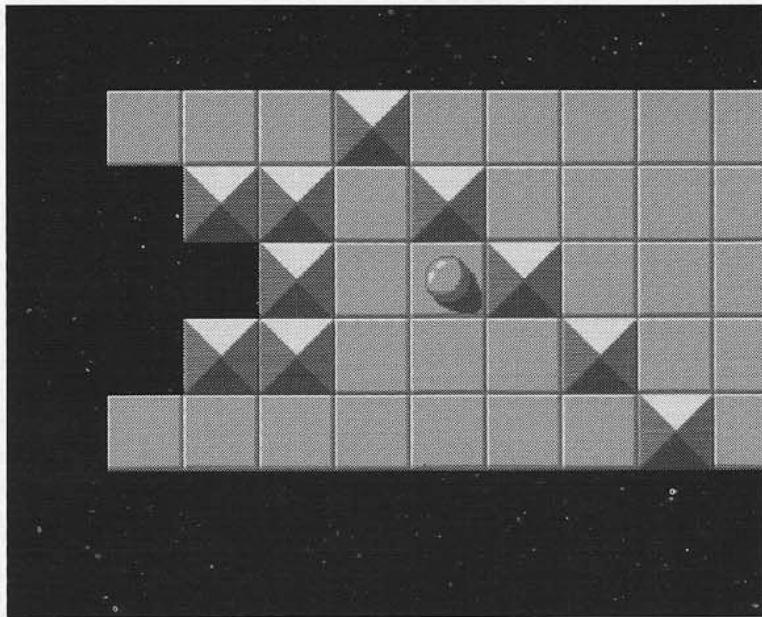


Figure 4 - Results

Ncommand Pro goes Commercial

Ncommand has been around for quite some time now as shareware; but now it has turned into a commercial product. The shareware product has now become redundant and the Deja Vu license to sell Ncommand shareware has expired. It is now illegal for PD clubs to sell the shareware version!

The full commercial product is now being imported exclusively by Public Do-

main Plus. For those who don't know what Ncommand is, it is not an extension but a set of procedures that allow the user to program Workbench 2 and 3 style icons, windows and screens. This does not mean Intuition programming (that's coming in the new AMOSPro update), but it means creating a type of fake Workbench environment on AMOS screens. You can also create requester and dialog boxes. This is a welcome relief to owners of AMOS 1.36 who don't have the Interface Language like AMOSPro owners. □



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Down the Opal Mine

by Robert Roy, *Opal Technology*

Opal Zap

In this month's column I thought we should check out some of the features of *OpalPaint*'s Zap function. Yes I know it's a bit of a gimmicky name, but we couldn't think of a more traditional, computer-type one. Anyway, if you haven't used it yet you are really missing out on something.

OpalPaint usually works on areas of the image as large as the viewable window. While this window is equivalent to full PAL broadcast resolution (up to 768 x 576 in size), *OpalPaint* is capable of working with images up to 32,000 x 32,000 pixels in size. The question arises: how can I do an operation on the whole image at once without having to scroll around and match up the edges of each operation area?

The answer is the Zap. The Zap function can be simply described as equivalent to a filled rectangle tool dragged out to cover the complete image, not just the viewable window. All other options will work the same, including colour selections, drawing mode, transparency etc. In fact, a good way to develop various image effects is experiment with a smallish filled rectangle (undoing each time) and then Zap the whole image when you have the effect you want.

A better Zap

An important enhancement in V2.0 (and a few of the earlier beta versions of *OpalPaint*) was a major extension of the Zap function. It is now "undoable"

(although if there isn't enough memory for the undo buffer you can still proceed only after a warning). It also works with gradients, stencils and alpha transparency. If you are still using an early version of *OpalPaint* you will probably be limited to a version of the Zap function that works like a SOLID, filled rectangle, i.e. no gradients, no alpha transparency etc. Another good reason to call Opal Tech and arrange an upgrade today.

The Zap can be accessed in several ways. The first is via the Zap button on the Extras Menu Bar or the Amiga-z keyboard shortcut. The percent-finished will tick up in the Feedback area and

shortly the whole image will be changed. The other method is especially useful when image processing. Many drawing modes (again in V2.0) have a Preview button which presents a slider (or two, or three) so you can adjust various image settings while watching the effect of that setting on the image in real time.

For example, using the extremely useful "Balance" loadable mode you can raise or lower the red, green, blue, brilliance, contrast and/or gamma of your image. While you can of course return to the "normal" painting screen and apply your previewed effect to a defined area of the image, all of these "Preview" modes also have a Zap button. This way if you want to retain the effect you have just previewed for the whole image you can "Zap" it and make it permanent. Here are a mixed-bag of nifty Zap effects for you to try. I hope they will trigger other ideas as you use them. Drop us a fax, letter or some e-mail with your ideas and I'll try to include them in a later column. Here goes.

Great Backgrounds

1. Do great smooth linear and radial gradients over large images. Set up the colours, check it out using a filled rectangle, then Zap away.



2. Like the previous one only on steroids. Set up a gradient with lots of transparency transitions that go between transparent and partially opaque (like a sine-wave). Using the specified-angle type of gradient, do multiple Zaps using a different angle, different colours and/or different spacing between the "waves" each time. This should build up beautiful patterns. Half the problem is knowing when to stop.

3. Choose a global transparency (try 50% first) and white paintpot. Using normal Paint mode, Zap to create a washed-out image that's a great background for titles or advertising. Try different colours, different transparency settings and adjusting contrast or brilliance on the "washed" image (again using Zap).

Changing images

4. Zap images using some of the great loadable drawing modes to give a simple scan or frame grab a fine-art or even

surrealistic effect. Some of my favourites are Emboss, Woodcut, Oil-Paint (try different levels) and even Minimize, Maximise and Median. Warning - some of these modes are VERY computation-ally intensive, or in other words they can take a looong time. Time for a cup of coffee, but the results are worth it. Another good reason to test the effect on a small area before taking the plunge.

5. ChromaCTRL is a topic all its own. You can do some really weird stuff with colour curves (and remember that all the effects can be applied to live video using the Video Processor Module).

Another neat trick is to position your mouse pointer over the slider or colour curve you want, then with the other hand toggle the screen behind the 24-bit image using F10. Move your mouse hand and, hey presto, instant feedback. F10 will get the menu back again.

6. If you're feeling adventurous try the Convolution operator. There isn't

room here to elaborate much, but check out the V2.0 Reference Manual. If you own ADPro try some of the convolution matrices included there, and you can often glean good matrix examples from books about Adobe Photoshop (you know, on the mac).

For More Information

If the above ideas haven't got you bursting to hop into OpalPaint and spend a happy hour or six experimenting, then you're probably comatose. Get those ideas flowing in, and as always please feel free to contact Opal Tech on (02) 899 4322 with any questions or comments. Our fax number is (02) 899 5749. Write to us at PO Box 6565 Baulkham Hills Business Centre, NSW 2153. We are also keen to see your participation on the AmigaNet OpalVision echo at a BBS near you.

Happy fossicking. □

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Hot PD

Daniel Rutter, usually found on the modem or hunched over his latest pile of Hot PD disks, brings us up to date on the latest in almost FREE software!

Amiga PD, like Amiga software development in general, is starting to get a kick in the pants from the arrival of the new AGA machines. More and more AGA supporting or specific software is showing up, and if a couple of the AGA demos I've seen are anything to go by, the game coders must be leaving smoking footprints on their way to get their hands on the new machines.

What does this mean for the vast majority of users, who don't have a new shiny machine on their desk? Well, the more Amigas get sold the more people will be writing programs, and programs which actually need 256 colours aren't all that thick on the ground.

For most, it's a nice option, but you'll be able to get along with an older machine. We're not going to be smothered in incompatible software just yet, if ever, but the benefits of the coming development boom will make everybody's computing life more interesting.

New Animation (++)

Eric Schwartz has, over the years, become something of an Amiga legend. He it was who created the Jugette animations, not to mention a pile of Aerotoons, which do for fighter planes what Thomas the Tank Engine did for trains.

Recently Eric's been concentrating on more traditional animations - short animated stories in the *Looney Tunes* mould, starring Flip the Frog, an ancient animated character whom Schwartz has reincarnated and endowed with a curvaceous (though furry) girlfriend, Clarisse Cat, and, as is traditional, a wide variety of obstacles between him and her.

The latest Flip animation, *Quality*

Time, requires a whopping FIVE megabytes of RAM - though you'll be pleased to know it doesn't need a hard disk; two floppies are essential, though, and it comes on four disks. Personally, I prefer the Aerotoons to the cringe-provoking innuendo of the Flip animations, but it's a matter of taste - and it's certainly very well done, and is available from all good PD suppliers. *Quality Time* is ShareWare - you have to send Eric whatever you think the animation's worth. Sounds fair to me.

MegaView (HOT +++)

I mentioned *MegaView* a couple of months ago. It's a locally coded combination GIF and IFF graphic viewer, which will also view files as they're downloaded. The current version is v2.40b which has fixed mounds of bugs, though on my heavily configured machine I still managed to make it fail. Not to worry; it works fine for most people, and being able to view pictures

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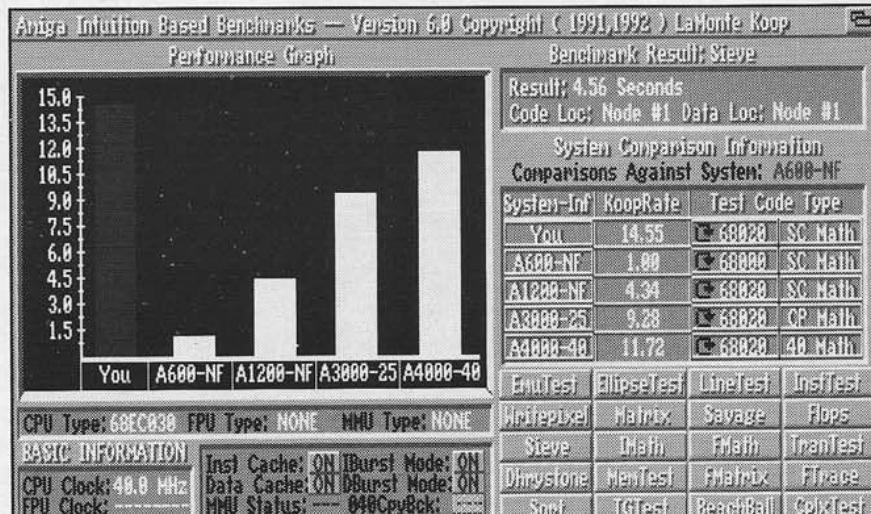
- + Drover's dog could use it
- ++ Basic system knowledge required
- +++ Experienced users - CLI use probably involved
- ++++ Wizards only

as you download them is a great time saver - you can abort downloads of duff pictures nice and quick. *MegaView* now works under WB1.x as well as 2; the current version is 2.40b.

AIBB 6 (HOT ++)

Amiga Intuition Based Benchmarks, the program everybody uses to compare Amiga performance, has hit v6.0, and has been heavily revised. The graphics tests have been completely rewritten to accommodate different screenmodes, and quite a few bugs have been tidied up. The program's a bit smaller, too. Unfortunately, the format of the saved load modules has changed, so those with a library of modules for different machines might want to keep an older version of *AIBB* until they can retest all the machines.

Amiga Intuition Based Benchmarks



Artillerus (HOT ++)

I've got something of a hangup about old style games (no! gasp regular readers), and *Artillery*, the game where two weeny tanks take pot shots at each other on a craggy landscape, is one of the classics. *Artillery*'s been updated on the IBM as *Scorched Earth*, which features assorted mega-weapons to make your opponents' lives brief, but the Amiga has only had the gorgeous but limited *Tanx* and the abysmally coded *Stan's Abysmal Hell*, neither of which have computer opponents.

Well, now there's *Artillerus*, which is a little flaky in its coding and doesn't look nearly as sexy as *Scorch* but features a fair number of weapons, decent computer opponents and fair enough gameplay, although it can be a bit picky about the system you run it on. Try running it from a bare boot with no other programs going. It's no *Scorch*, but it's pretty good, and worth a look.

JiveBunny (HOT ++)

This month I've scared up quite a few Really Stupid Programs. I can't help it, I love the suckers. *JiveBunny* is a nifty little program which generates dance/rap lyrics, which you could actually believe came straight off a record by one of those Italian BOOM-tisha BOOM-tisha musical production lines. It cracked me up.

Unfortunately, *JiveBunny* when run from Workbench opens a window too small to see the text of the song (such as it is). If you've got WB2 you can just resize the window bigger and the text will automatically move to fit; if you're still on WB1.x you'll have to run *JiveBunny* from the CLI.

LEMON (HOT +)

Another Damn Fool Program, this one resembles *WalkingMan*, which I mentioned some months ago, but instead of populating your screen with

little climbing, walking, falling stick men, does it with lemmings. Induces severe double-takes in co-workers. Huge fun, especially when you start torturing the little suckers with *DPaint* ...

DExe (HOT ++)

One for the floppy users - hey, there must be one or two of you out there. *DExe* is a set of two very small programs that do very small simple things; one executes a command whenever a disk is inserted. Both will execute a command when a certain condition is met. With *DExeIn* it is whenever a disk is inserted, while with *DExeOut*, it is whenever a disk is removed.

So you can set up your system to automatically check to see if "disk.script", or whatever, exists on a disk you insert, and to execute it if it does. So when you insert your word processor disk, the program starts automagically, and likewise with your

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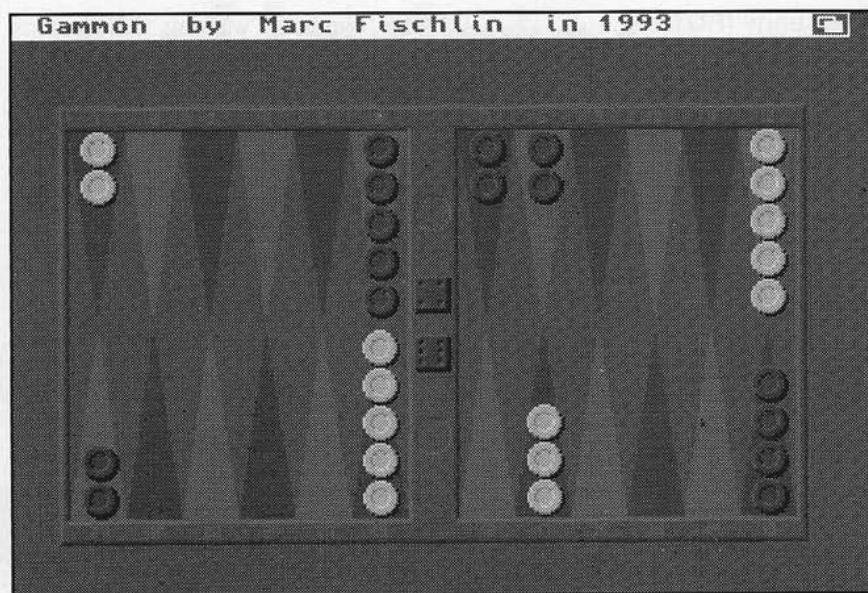
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Gammon 13

other software. With some elegant AmigaDOS scripting you could turn it into an autoformatter for blank disks, or you could just play the old gulp and belch sounds whenever people insert or remove disks. *Dexe* makes life for floppy users a bit less painful.

InstallerGame (HOT +)

Another stupid program, this one gives you a weeny adventure game that runs on the Commodore Installer utility - which isn't included, by the way, but don't worry, if you don't have it you're not missing much. Installer was never meant to be a game interface, it's meant to install things - such wanton misuse of the operating system deserves applause. Requires WB2.

Titanic Cheats 1.4 (+)

Paul Lawrie has, with his ongoing *Titanic* series, compiled the definitive list of Amiga game hints and cheats. If you get the *Titanic* disk and register it - it's ShareWare but only \$10 Australian, no fancy currency conversions required - you'll have the most up to date and best vetted list of hints and cheats you'll ever find. And, wonder of wonders, it's actually quite easy to find what you're looking for, because everything's kept in small alphabetical files, not the vast monster lists of many other versions. If

you're the kind of low, shameless, completely skill-free scum that wants to cheat at their games (heck, I am), this is the disk for you.

FastCache (HOT +++)

I've recently reviewed the commercial hard disk caching package *HyperCache Professional*, and it's a bit of a bummer for its stockists that *FastCache*, a ShareWare product (rego \$20 Australian, again you don't need US bucks), seems to work better.

Cache software, in a nutshell, accelerates your drives, hard or floppy, at the cost of a chunk of RAM, typically 512k though you can change that. *FastCache* is just as configurable as *HyperCache*, though a quarter of the price. It beats the earlier *SmartDisk* handily, but then *SmartDisk* is PD - free.

You'll notice the most difference if you've got a fast processor and a slow hard drive, but a cache will make a noticeable difference on just about any system, hard or floppy. *FastCache* works well, though it's not for amateurs; *HyperCache* is a little friendlier. We use *FastCache* at the ACAR office.

Gammon (++)

I like backgammon. The skill factor of a board game with the added thrill of, ahem, a friendly little bet. Well, this

computer version doesn't have the monetary incentives, but it could still be a useful primer to build your skills before you venture forth to fleece your friends. The latest version is 1.3, and adds some new computer opponent modes, which have distinct styles of play. It still disagrees with something in my highly configured system, but works fine from any normal setup. Unfortunately, *Gammon* can't be distributed for profit, so finding it's your problem.

Fbl (+++)

Once for the hackers. There have been programs out for ages that accelerate blitter (if you don't know what that is, you don't need to) operations, to make menu browsing, WB updating, text scrolling and similar graphic operations quicker - by about 10% on my machine. Hey, it makes ME excited. *Fbl*, though, is another program you can't make a profit from, so find it on a bulletin board or at a user group.

PC-Task 2.01 (HOT ++)

Local programmer Chris Hames has had considerable success with his *PC-Task* IBM emulator, which is the best software emulator available. Software emulators let you run IBM programs without buying any expensive new hardware - the tradeoff is they're slow. If you have even the vaguest thought about playing a game on a software emulator, abandon it now - if you get the game running at all, you'll have to line it up with a post to see if it moves.

The current version of *PC-Task* features a lot of improvements. The most notable changes are improved mouse emulation, better CGA emulation and speed, and higher MDA speed too. There's some EGA & VGA emulation, though not 256 colour even if you've got an AGA machine. The evaluation version won't save data or print, and doesn't have much of a manual, but it'll give you the idea, and rego is only \$40. *PC-Task* is deservedly popular - it's as much PC as most people need!

Sysinfo (HOT ++)

Another local program, *Sysinfo* is a quick and dirty way to get a look at

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intuition	FAST	RAM \$00207F2C V37.318
dos	FAST	RAM \$00210008 V37.44
SPEED COMPARISONS		EXPAND DRAFT
Dhrystones 6848	You	
A600 68000 2MHz	11.43	
B2000 68000 2MHz	0.69	
R1200 EC020 14MHz	4.96	
R2500 68020 14MHz	2.94	
B3000 68030 25MHz	1.38	
R4000 68040 25MHz	0.33	
CPU Mips	6.31	QUIT MEMORY BOARDS
FPU MFlops	N/R	DRIVES SPEED PRINT
Chip Speed vs R600	1.69	DCACHE DBURST DCACHE
		DCACHE DBURST ALL

Sys Info Version 3.22

your system. Its processor and drive speed functions are pretty unreliable, but it'll also list boards, drives, all sorts of available resources and so on. The latest version's 3.22, and adds some bugfixes, an external board definition file to learn new expansion boards, better CPU and MMU detection, and improved KickStart recognition. Generally useful, and ShareWare.

Virus Checker 6.26 (HOT ++)

With the death of *BootX*, John Veldthuis' *Virus Checker* is what a lot of people are turning to for virus detection. Its approach to virus hunting is simpler than *BootX*'s was, but that doesn't make it any worse. It's certainly regularly updated, small enough to use on a floppy system, and you don't have to send the author money unless you want to.

Virus Checker will hunt both bootblock and file viruses, is simple to use and won't munch much RAM or processor time if you leave it running in the background all the time. It works with all versions of Workbench, and the current version is 6.26, adding a few more virus definitions. Everybody needs a virus checker, although you shouldn't get paranoid about it - why pay more?

Grammar (HOT ++)

I recently came across this simple,

bare-bones grammar checker, which works from the CLI and checks for repeated words, split infinitives ("to boldly go"), sentences beginning with and or but, sentences ending with prepositions, use of the words very and that (although you can turn off the "that" detection), possible use of like instead of as, double negatives, some types of wordiness and improper pronoun use. At the end you get the usual comparisons between you, Steinbeck, Hemingway and BYTE magazine, though I really don't know why.

It won't turn you into Shakespeare overnight, but it picks up the most glaring errors. A handy tool to have, and it checks nice and fast too.

Amiga Connection

Big things have been happening on one of my favourite bulletin boards, the Amiga Connection BBS Club, on (02) 970 6444. AC gets a wide variety of Amiga message echoes, and that's why I first called it, but recently a lot else has taken place. For some time AC's been getting the Amiga Distribution System and SkyLink Amiga Network file echoes, which are great sources of new files, but now it's also hooked up to TapeLink, a system which gets around the prohibitive cost of intercontinental telephone connections by grabbing the hottest new software each week, whack-

ing it onto a huge tape backup cartridge and mailing it out. Sure, you don't get the files quite as quick, but you get 'em a heck of a lot cheaper - and you get everything from amateur radio to *Windows* in one place, instead of hunting all round the country for that elusive program.

Amiga Connection now has five CD-ROMS online with the complete (and quickly updated) Fish disk library, the 220 disk Scope Library, more than a gigabyte of 17 Bit PD software, plus the more. IBM CD-ROM support will follow, as soon as enough people register to make it worthwhile. Membership starts at \$35 and the highest level is \$55 a year, which is very reasonable by big board standards.

There's also a shopping centre online, where you can buy just about any Amiga-related item at darn good prices! If you're in the 02 area, give AC a ring - at those out of state might like to go for an occasional call at the off-peak times, too!

Until these big improvements, Distributor BBS in Adelaide (08) 341-5255 was my monster board of choice - but once AC gets up to speed I can see the STD bill dropping!

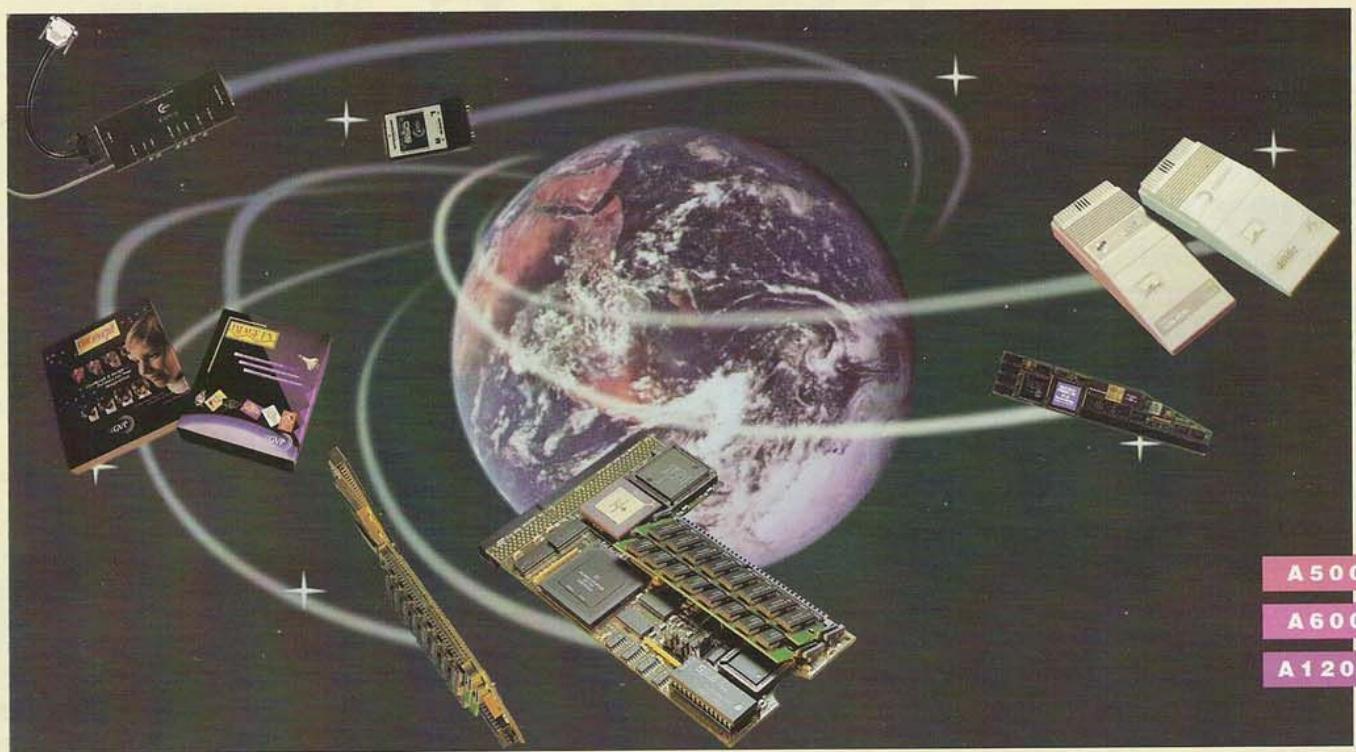
Watch out - new virus

That's right fans, another moron out there in computer land has taken it upon himself to give us another dangerous program, this time a trojan horse. These sorts of programs purport to do one thing and, when run, also do something really original like destroying all your data. The latest one's called *ModemChecker*, it's 15516 bytes long, and it replaces the LoadWb command in your C: directory with another, which nukes your hard and floppy disks. I wish these idiots would go back to slashing bus seats, really I do.

The companion disks for this column, available as usual from Prime Artifax PD, are called HotPD10a and b. Everything's iconned and easy to use, but do take note of the difficulty indications next to the programs.

See you next month!





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Workbench 2.x users with a hard drive - this is the best FREEWARE terminal program on the market. Term has an excellent interface, powerful script language and phone-book support. ('030 Version Included) Installation Script Included.

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Hard Disk Utilities #1

Includes Hard Disk Backup program, ALOCK security, File Undelete, Azap disk editor, Bformat - automatically marks bad sectors out of use, Boot Logo, FindIt - locates files fast and HDMem - a Virtual Memory system. 1 Disk.

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The Silicon Secretary is just for you - keep track of your bowling league scores and much more. Requires 1Mb of RAM. (ONE DISK)

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On this disk you'll find a fully working genealogy database program, ArJay, which allows you to attach free form notes and pictures to each family and individual record. The program interface is easy to use and well written documentation is included. Up to 1000 people may be entered. The Amigaworld database is also on this disk. (ONE DISK, 1Mb recommended)

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Phil Campbell's Entertainment

Good news on Amiga games market at last!

There are signs that the drought in the Amiga games market is finally breaking. As Amiga gamers will have noticed, over the last few months there's been a definite lack of new games - but now, according to Commodore PR Guru Howard Needleman, the tide is about to change. Howard has been checking out the world Amiga scene over the past few weeks, and he's right up to date with the latest trends - next month, we'll bring you details of the games you can expect to see in the near future.

A1200 Zool

Meanwhile, in another neck of the woods, EA's Robyn Tunsted reports steady sales of the new A1200 version of *Zool*. Though not setting any sales records, Robyn agrees that sales are healthy for a title limited to a new machine like the A1200. A good sign for the future!

Hot Point Software takes off

After some delays, Hot Point Software is now off and running. Official reasons for the delay include the fact that the original software order from Brash's was unexpectedly huge - and

more importantly, that Managing Director Kevin Davies was busy becoming a dad. Congratulations Kevin! Together with the \$99 software packs previously mentioned here in ACAR, Hot Point are now official distributors of titles from around 18 international software houses. New titles include *Body Blows*, *Super Frog*, *Vikings*, *A320 Airbus*, *Arabian Nights*, *Trolls*, and *Valhalla*. This is great news for the Amiga - we'll keep you up to date with full reviews! For more information, phone Kevin Davies on (02) 428 7791.

ACAR Hints and Tips Disk

After our huge ACAR Hints Disk sellout at the World of Commodore Show, it may well be that everyone in the known world already has a copy. But if you're the last remaining person without ACAR Hints Disk 1 and 2, why not act now?

The disks are packed full of hints, tips and solutions for hundreds of games - so if you're stuck in your favourite game, there's almost sure to be an answer. Just send a blank disk, a cheque for \$5.00, and a stamped self addressed envelope to Phil Campbell, PO Box 23 Maclean NSW 2463. If you're ordering both disks, send just \$9.00 - that's right, a huge 10% discount!

Entertainment Letters

Send your entertainment news, views, and clues to Entertainment Mailbox, PO Box 23 Maclean NSW 2463. Keep your letters brief, to the point - and on the subject!

Caught in Captive

Dear Phil, I'm stuck in the game *Captive* - any help in getting through Mission 2 would be greatly appreciated. I have explored as much as possible and yet have unsolved codes, and an extensive unmapped area to complete. Also, I'd love any help I can get on *BattleTech*.

Dr S D A Demilio, O'Connor ACT

Ed: Stay tuned Doc, and we'll see if anyone can prescribe something for your problems.

Finest Hour Found!

Dear Phil, In reading the May issue of ACAR I came across a letter in your Entertainment Section from Phil Body from Albury NSW. He was looking for *Their Finest Hour* and when I searched through my games I found it - still in the original box with instructions. If Phil wants to buy or swap this game I am willing to co-operate.

Jordan Telfer

**40 Elanaru Rd, Elanura Ht's
Sydney NSW, 2101**

Ed: Hope you're reading this Phil - if so, get in touch with Jordan at the address above.

AMOS Games Available

Dear Phil, If anyone would like to have a look at some AMOS games, please write to the address below for information about our DEMO disk which shows all our games. Armour

Software, 55 Waitara Grove, Norlane,
Geelong, Vic 3214.

Ed: Okay - done. Hope you get a good response. Feel free to send us a copy of your disk here at ACAR and we'll take a look too.

Aussie Rules Fanatic

Dear Phil, I've owned an Amiga 500 for five years now and have seen or played many sports simulations. Of the sports sims, I enjoy playing Australian oriented games the most, especially cricket and rugby. But what I'm really after is an Australian Rules Football Simulation. Is there any such animal out there? Perhaps there's an AMOS wizard who might have already programmed something like this. I think there'd be a huge demand for an Aussie Rules computer game, especially in the southern states.

*Stuart McKenzie
Hoppers Crossing Vic*

Ed: Um, excuse me Stu, but what's this Australian Rules Football stuff? Never heard of it. (Hey, don't panic - I was only joking!) Seriously, though, it sounds like a top idea. I wonder why nobody thought of it before? Maybe you should drop a line to Armour Software (see address above) and see what they can do!

A Frustrating Situation!

Dear Phil, I recently purchased *Leisure Suit Larry 2*. As I always do before running a program, I back up a copy of each disk. After spending many hours playing this game, I loaded disk four, only to discover that somehow I have formatted it blank! No problem, I thought - I'll get my backup. With only around 20 minutes of game left to play, I find my backup has a read/write error. This has left me feeling VERY frustrated. Can someone help me to obtain disk 4?

Andrew Lord

13 Rainsford Tce
Campbellfield Vic 3061

Ed: Gee, Andrew, you sure know how to paint yourself into a corner! Maybe there's a kind reader out there who could send you a copy of Disk 4 - let's hope so!



I received three high scores this month which is a bit better than last month. James Browning blitzed the previous high score for PORTS OF CALL on the Amiga, Charles Smith clocked up a few more confirmed kills for WINGS also on the Amiga and our own Andrew Gormly placed his name again into the illustrious HALL OF FAME tables with a score for Rick Dangerous II. Thanks fellas. How about the girls send in some scores as well?

Please note, during the next few months we'll be pruning the Hall of Fame a little, so if your name's been appearing for years and you're just sitting back taking it easy - it's curtains.

Must be off, but before I go, I must comment on the state of the waves in Yamba. Totally brilliant, man! But to the tourists, stay away from the best surfing spot in Australia, Lovers Point. See ya later.

Send your high scores to
Juris Graney, 41 Cameron St,
Maclean, NSW, 2463. Please
mark clearly whether your
scores are for C64 or Amiga.
And remember - **No cheat
modes allowed!**

AMIGA

ACTION FIGHTER 132,530
Robbie Baker
ALERT 359,700 Robbie Baker
ARKANOID 1,052,610 S Walter
AMAZED 130,500 C Turnadge
ANARCHY 646,560 Sid Vicious
AQUATIC GAMES 4,170,666 -
Phil Cary
AXEL'S MAGIC HAMMER
329,800 Aaron Buscumb
BAAL 134,250 Davo
BARBARIAN II 100% Sid Vicious
BATTLE COMMAND 334,200
Peter Cain
BATTLE SQUADRON
99,999,999 (c) Amos Burbridge
BEYOND ICE PAL 67,826 (c)
Chris Turnadge
BIO CHALLENGE 29,000 A
Sanderson
BLOCKOUT 85,281 S Lark
BLUES BROTHERS (C) LOOPY
BOMBJACK 468,120 K Butters
BUBBLE E + 276,850 (C) C Toyne
BUBBLE BOBBLE 2,960,980
Kristy Cameron
BUDOKAN 6:08min M Sorensen
BUGGY BOY 113,260
Powerhouse Nick
CAR-VUP 484,122 Happy Hacker
CHASE HQ 7,426,060
Powerhouse Nick
CONT. CIRCUITS 4,815,390 Dolly

CRAZY CARS 93,622,590(c)	(c) Timothy Johnson	Batman 521,360 The Joker
Robert Cameron	RAMPAGE 212,912 G Wilson	Batman - Mve 1087080 M
CRAZY CARS CHALL	RICK DANGEROUS II 83,810	Bradley
3,000,000,000! M Summers	Andrew Gormly	Bangkok Knights 39,600 J Smith
CRYSTAL HAMMER	ROBOCOP 450,890 (c) Wize Owl	Bomb Jack 521,820 Adam Wade
6,787,921(c) Kristy Cameron	ROTOX 183,050(c) Faye Doherty	Bubble Bobble 6,963,930 (c)
CYBERBALL 475,000 D Marsh	SIDEWINDER 904,350 Sharon	David Gavrilovic
DENARIS 53,900 Peter Evans	Elsley-Eades	Buggy Boy 182,790 P Murray
DIABLO 1,490 Timothy Johnson	SILKWORM (Heli) 9,963,360 (c)	CABAL 194,450 The Joker
DRAGON NINJA 406,400 (c)	Robert Cameron	CHASE HQ 12,436,129(c) David
WISE OWL	SILKWORM (Jeep) 2,369,571	"Moira Jane" Sanna
DOUBLE DRAGON 962,355	Kristy Cameron	CHASE HQ II 29,100 (C) A Wade
Robert Cameron	SKWEEK 3,375,400 Faye	CREATURES 10,123 Adam
DOUBLE DRAGON II 201,330(c)	Doherty	Malinowski
The Warrior	Space Ace 24,680 (c) Stare Bear	Davids Mid Magic 669150 Joker
EDD THE DUCK 5,820 A Gormly	SPACE HARRIER 210,855,250	DOUBLE DRAGON 35,820 (c)
ELIMINATOR 246,570 G Munro	Maverick	Atul Prasad
EMERALD MINE Level 23 (d)	SPEEDBALL 17,650 A Burbidge	DOUBLE DRAGON II 255,190
Timothy Johnson	SPEEDBALL 2 488-0 M James	Nick van Heeswyk
FIRE & ICE 376,750 The Prophet	StarWrs 5722822 w 33 C Mingos	Dragon Breed 496,870 H Hacker
FINAL FIGHT (C) LOOPY	STRIDER 175,350 Neil Young	FAST BREAK 136 to 9 C Byrne
FLOOD 13,135 Matthew Beeston	SUPER CARS 27 races (c)	Ghosts & Goblin 325,600 A Wade
GAUNTLET III 270,509 LOOPY	SUPER CARS II Hard Level '42'	Ghouls & Ghouls 558,110 (c)
GEE BEE AIR RALLY 308,726	The Untouchable	Adam Wade
Robert Irwin	SUPER HANG-ON 25,042,850	Giana Sisters 287,100(c) A Wade
IANA SISTS 112,480 A Annen	David Worthy	GRYZOR 228,660 Mean Max
GODS 13,501,379 (c) Wize Owl	SUPER OFF-ROAD \$4,930,000	H Maradona Lv M N van
GOLDEN AXE 499.9(c) The	Greg Hingerly	Heeswyk
Untouchable	SUPER WONDER-BOY 208,900	HAWKEYE 260,400 Mat Inman
HYBRIS 2,934,425 Andy Tyson	Adam Annen	Ikari Warriors 308,300 J Aldridge
IK+ 1,039,200(c) P'house Nick	SUPER SPACE INVADERS	INT. KARATE 139,300 P Millward
IMPOSSIBLE MISSION 66,380	814,355 Andrew Hay	Last Ninja II 17m44s (c) D Carter
Diane Unwin	SWIV(H) 1,208,210 (c) R Adams	MIDNIGHT RESISTANCE 28,540
IMPOSSIBLE MISSION II 67,900	SWIV (J) 2,417,330 S McKinlay	(c) Dennis Pike
(c) David Dilkes	Sword Sodon 403,500 S Begley	MEGA GIANNI SISTERS
INDIANA JONES L.C. (c) P	TEEN.M.N.TURTLES	328,746 Mean Max
Nicoll	546,600(c)James Leeken	NEMESIS 1,633,200 Adam Wade
INDIANAPOLIS 500 37.00 sec/	TEENAGE QUEEN \$3900 (c)	OPERATION THUNDERBOLT
243.24mph Ian Klaus	Ronald Biggs	78,600 Adam Annen
INERTIA DRIVE 33,600 A	Terminator II 254,960 (c) P Rucci	OPERATION WOLF 776,350
Gormly	Test Drive 237,308 S	Winston Diaz
JAMES POND 2,500,000 Mark	Demchinsky	OUTRUN 19,952,780(c) The
Shillington	Test Drive 2 659,992 M Summers	Untouchable
KARATE KD II 54000 M	TETRIS 65,300 (1417 Lines)	PARADROID 303,125 M Inman
Summers	Ray 'THE LEGEND' Brown	PAPERBOY 103,100(c) J Nunes
KILLING GAME SHOW 699270	TETRIX Level 232 Stephen Lark	PIRATES 143/100 D Stewart
David Thompson	THE RUNNING MAN 123,500	PowerDrift 872,940(c) A Annen
KLAX 4,396,040 Happy Hacker	Daniel Rucci	QUE-DEX 639 Chris Byrne
Leatherneck 88700 T Humphries	Thunderblade 2034040 De	R-TYPE 1,890,210 Atul Prasad
LIVE AND LET DIE 96,520	Moose	RAINBOW ISLANDS 7,653,241
Merekeen Beaton	Thundercats 522,300 S Southurst	Adam Malinowski
Major Motion 50,658 O Webster	TOWER OF BABEL 25,934 (c)	RAMPAGE 180,000 Adam Wade
Menace 996,481 Kamikaze Andy	Stephen Lark	Rick Dangerous 66,280 A Annen
MIDNIGHT RESISTANCE	TOKI 115,963 (C) Loopy	ROBOCOP 237,170(c) A Wade
332,610 Chris McInally	TURBO OUTRUN 100,260,819	Rolling Thunder 417,280 A Wade
MindWalk 306214 P Schumacher	Matthew Mantle	Samuelard 235,300 P Millward
Mouseltrap 71,977 Dave Rich	Turrican 1,735,100 (c) A Jenkin	SHINOBI 664,372(c) W Diaz
NARC 180,800 Damien Carsburg	TURRICAN II 3,307,700 (c)	Silkworm (H) 1212200 R Zanker
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NITRO 283,000 (C) B Bannerman	TV Sports Foot 189-0 D	Street Fighter 168,900 A Wade
NUCLEAR WAR 990 (c) P Rucci	McKinney	Super Cycle 239,840 (c) A Annen
N Z Story 546,695 E Beaton	TWINWORLD 24,640 Carol Love	TARGET RENEGADE 330,450
ONSLAUGHT 39,918 A Gormly	TYPHOON 54,255 Owen	C. Byrne (clocked)
OPERATION THUNDERBOLT	Webster	Test Drive 38,144(c) J Nunes
166,400 Andrew Gormly	U.N.SQUADRON 762,255 (c)	Test Drive II 249,543 (c) A
Operation Wolf 355,680 G Wilson	Tony Stojanouski	Batroc
Outrun 59,180,659(c) Wize Owl	VIDEO KID 371,050 Andrew Hay	Tetris 81,613 (1021 Ins) The Fly
OFFSHORE WARRIOR 626,345	VIRUS 22,637 Jason Dykstra	THE TRAIN 9,500(c) Adam
Jacob Booth	WHIRLIGIG 28,210 Nathan Allen	Annen
Pacmania 3,250,140 A Burbidge	Wings 509 kills Charles Smith	Thunderblade 1,851,040 M Inman
Pinball Dreams 464580351 The	Wings of Death 56,670 R Irwin	Thndercats 310100 S Kandaurov
Fly	WONDER BOY 381,186,042(c)	T.M.N TURTLES 4397 A Annen
Pinball Magic 423,560 Paul Rucci	Kristy Cameron	TRAZ 112,400 Segey Kandaurov
Pinball Wizard 3,893,570 S Hose	XENON II 1,107,280(c) M Porta	Turrican 1,239,040 A Malinowski
Pioneer Plague 35,412 K Sooby	ZOOM 67,051 Steve Jones	Untouchables 70,230 S Watford
Plutios 299,000 Davo	COMMODORE 64	WIZBALL 999,999 (c) G. Beaven
Populous 347,990 M Summers	Alley Cat 1,101,150 S Mitchell	Wonderboy 4,775,470 L Walters
Ports of Call \$10,461,843,000	Altered Beast 312,400 R Zanker	
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POW 612,865 David	Arkano 2 756,250 Mean Max	
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Scores followed by (c) indicate that the game has been completed.

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Phil Campbell checks out a sophisticated new Role Playing Game set on a forbidding alien planet.

Hired Guns

Rorian Deevergh is a mercenary. In fact, he's a mercenary leader. From his military days - five years and an entire star system away - Deevergh has amassed a group of renegades just like himself. People who are collectively hunted by the authorities. In the high-tech future of 2707, a life of crime is not easy. All credit transactions are relayed to a central authority. Your name, ID and location are automatically logged, making life on the run almost impossible.

Not only that, skills are difficult to sell. For each ability possessed by a human, there's a robot who can do the same - cheaper and more reliably. The fact is, these days the only area where humans excel is in killing. And for the right price, Rorian's group will take on almost anything. Payment is in rare metals. No questions.

The current operation is a hostage rescue from the catacombs of a backwater planet called "Graveyard." The client? Who knows? No questions asked. And after all, if one terrorist organisation takes hostages from another terrorist organisation, nobody much cares. That's why a group of mercenaries fit the job profile perfectly - and why red tape and protocol can be ignored. What does it matter who gets in the way? The game begins. You've landed safely on the ever-so-cheerfully named planet of "Graveyard," just outside the catacombs.

The screen is split into four quadrants, each quadrant showing the view from the eyes of one member of the team. This takes a bit of getting used to - because naturally enough, the one person you won't see in the window labelled Rorian is Rorian himself! The game is mouse controlled - click inside a view window, and the character will move in the direction of your mouse

pointer. Above each window there's a row of control tabs, giving access to the team member's inventory of weapons and other goodies.

As you guide your team around the catacomb complex, watch out for hidden security wafers - electronic keys that will take you into hidden areas. You'll also find Teleport units, moveable blocks and other obstacles that will stretch your problem solving ability to the limit.

Take care! You'll also bump into plenty of nasty creatures, some of which will hatch from eggs in front of you. In my first foray into the Graveyard Catacombs, I soon met a member of the "undead" - and ended up dead myself.

The fact is, the vast majority of the encounters in the catacombs will end in bloodshed. Whether it's your blood or your enemies' depends largely on the weapons in your arsenal. Make sure you've chosen a suitable weapon from

FACTBOX

Hired Guns is a four player RPG with plenty of detail and sophistication.

Graphics:	83%
Sound:	78%
Gameplay:	86%
Overall:	85%

I played the pre-release Amiga demo-version. Distributed by Sega Ozisoft (02) 317 0000.

your backpack before you start!

In essence, *Hired Guns* is a dolled-up role playing game. As usual, your game characters are described in terms of a set of statistics - in this case, Fitness, Physique, Psionics and Experience. But the game certainly breaks new ground in terms of scope and presentation. Up to four independent players can join in the game on one machine. And the playing area is huge, with over 8 megabytes of data packed onto five disks. Graphics are nice, though small, and best of all, character images are fully customisable - if you have a scanner, you can even add yourself to the game! □



Finally, Phil Campbell discovers a game that's genuinely nice.

Trolls

My mum refuses to read this section of the magazine. She says the games I review are too ... well, too nasty. And maybe she's right. I mean, all the blood and guts and carnage. She's really pleased that Sega-Ozisoft's Kevin Bermeister has introduced voluntary censorship ratings for games - but she reckons everything should get an "R".

Well, this time - just for mum - I'm adopting a temporary NO NASTINESS policy. Because this is a review of a game that hasn't got a nasty bite anywhere - *Trolls*.

Packaged in a bright-as-a-button box, the game features those cuter than cute Troll dolls with the snub noses, black beady eyes and electric-shock hair that you can find in any toyshop. Perfect!

Gameplay is self explanatory. Guide your cutesy Troll through the garishly coloured Candyland, Toyland and

Medialand - to name just a few - in the quest to find and rescue the kidnapped Baby Trolls.

Let's start with Candyland, the most sickly-sweet level of all. Icy Poles and lollipops sprout like trees from Chocolate bar gardens; Candy cane poles reach tall into the sky; licorice bullets are suspended from nowhere, forming convenient steps between caramel fudge footways. It's a typical "platforms and ladders" style layout - all done with a \$27 bag of mixed lollies from your local corner shop.

There are, of course, some hazards. The Baby Trolls are scattered around the playing area, but to find them you'll have to avoid bouncing bombs, a galloping rabbit - the Easter Bunny, I presume - and a bunch of deadly fat-boys. Too many collisions, and it's curtains.

Around the levels you'll find balloons containing magic yo-yos. These

FACT BOX

Trolls is a bright and breezy platform game full of colour and fun. It's absolutely harmless!

Ratings

Graphics:	79%
Sound:	78%
Gameplay:	77%
Overall:	78%

Distributed by Hot Point Software (02) 428 7791. RRP \$69.95.

are handy. You can use them to knock out the nasties with a quick blow to the head - oops, sorry Mum - or you can attach them to platforms and swing Tarzan-like across otherwise impassable chasms.

Trolls can be played with joystick or keys. After testing both options, I settled on the keyboard, which was faster and more direct. Your troll walks, runs and jumps at your command - his movements are slick and smooth, and in true *Mario Bros* tradition, you can steer him mid-jump.

So there it is. A game that's genuinely NICE. A bouncy little sound-track, every colour of the rainbow flashing on the screen, cutesy little trolls - and best of all, it's actually pretty good fun to play. Even your mum will like it. □



Superfrog Solution

Part 2

Last month we left our intrepid *Superfrog* at the end of the first section of the Spooky Castle. In this ribbeting installment, Jesse Ahern takes you on a guided tour through the remaining levels ...

The Funpark

Escaping from your circus captors, you learn of a strange machine somewhere in Funland. Grab the coins and jump onto the spurting water to jump across the spikes. Get some more coins on the way. Go down the snowy-slope, and jump over the Slow-Down Pill. *Superfrog* can hold his breath, but you can jump over the Piranha Tank if you prefer. Grab the bonus stuff above the tank. Jump over the spiked turtle and get the Speed-Up Pill. Squash the Worm, and jump up onto the next ledge. Jump over the sets of spikes, and get the coins on the way. Grab the Speed-Up Pill, and jump through the chain of the Mace-Head. Ignore the 'ACME Sucking Thing' for the time being. Squash the ladybug while it's on the ground, and keep heading right. Go down the hole, squash the turtles and grab the bonuses. Go back up and onto the ledges, dodging

the guns. Flick the switch, and go back to the 'ACME Sucking Thing'. Jump into it, and you will be transported back around to near the turtle hole. Go right, and jump over the spikes (grabbing the coins) onto the snowy-slopes. Be quick, or you'll slide into the spikes. Keep this up until you reach the end of the spikes. Go far right to find another secret tunnel filled with bonuses. Take these, and head up into a room filled with steps and spikes. Negotiate these, and at the far right you will find the Exit.

The Ancient Pyramid

Through the haze, you see a legendary place with strange artifacts and symbols. An ancient pyramid seems the only option. Jump to the right, and collect the coins (careful not to get spiked by the thrusting spikes). Jump right up to the ledge and collect the coins. Drop down onto the ledge between the spikes. Now jump to the next, making sure not to be hit by the flame-shooting gun. Get all the bonuses on the way across the spikes. Once you get to the end, go down the slope (ignore the Speed-Up Pill just now) and dodge the thrusting spikes and Rock-

Crushers. In between the last two spikes, you will fall into a secret tunnel. Grab all the bonuses, and jump into the top-left corner of the cavern. Follow this tunnel to some more bonuses and a spring. Jump onto the spring to end up right back at the start. Go back to the slope, and jump up to collect the Speed-Up Pill. Jump up into the wall, and find a very handy short-cut over the spikes and crushers. Get the Lucozade and drop onto the slope. Jump over the boulders get the bonus things on your way up. At the top, jump across the spikes, get the Lucozade, and jump the second set of spikes. Run down the slope and get all the bonuses. Squash the Slug, and jump onto the spring. Keep jumping up, collecting the bonuses and dodging the fireballs. At the top, jump onto the spring and push left or right to dodge the spikes in the roof. Go back down the other side and continue to the right. Jump the spikes and land under the Pharaoh's Eye. Be careful, as it shoots at you. Go left, and you will fall down a secret tunnel. Get all the bonuses and go right into another tunnel. You will find more bonuses. Head back up into the first cavern and jump up to the top-left to find ANOTHER tunnel. Take all these bonuses, but don't jump on the spring. Go back to the first cavern and go to the bottom-left. You will find the last bonus tunnel. Follow it along, and get the bonuses. At the end, you will find a spring. Jump on it, and you will land on the spring in the first bonus tunnel and be shot back up to the start. Go back along the level until you reach the Eye again. This time, jump over

Ice World

SNOWMEN— Just waddle around. Can't be squashed or shot, so just jump over or dodge.



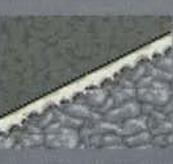
PENGUINS— Waddle around like the Snowmen do, but stop occasionally to pelt snowballs at you. Dodge them.



ICICLES— These spears of ice drop from the roof to embed themselves in the ground when you approach. Hatch out.



SLOPES— These slopes are more slippery than the slime on the floor in the Funpark level. You might be able to run up them with plenty of Speed-Ups, otherwise just jump up them.



Project F

SPHERES— Enter the screen and shoot at you. They take about four or five shots to kill.



BLOBS— Come into the screen and explode in a cluster of bullets. Kill quickly before they burst.



SPACE INSECTS— Enter the screen and float around. Shoot 'em.



SAUCERS— Just float up the screen from bottom to top. Shoot them and collect the bonuses they leave.



LIGHT BULBS— Fly in and shoot bolts of electricity at you. Destroy them quickly as possible.



LADYBIRDS— Enter in waves. Just shoot them and collect the bonuses.

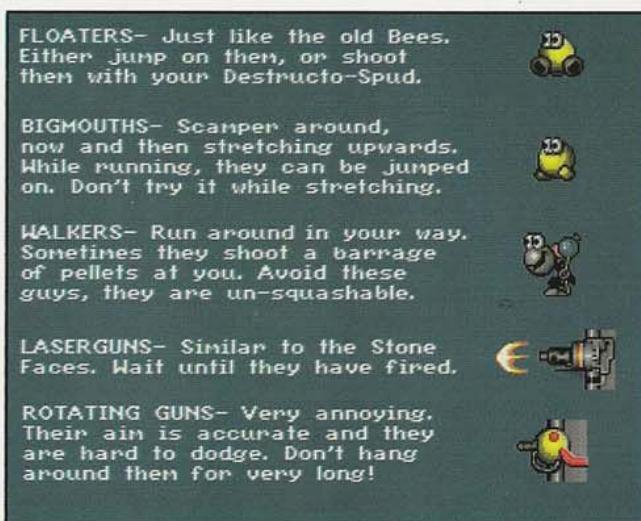


MISSILES— Fly in as one, but split into three. Shoot quick, they are too fast to try to dodge.





The Ancient Pyramid



Space Level

the right-hand spikes and squash the three slugs near the exit before going through.

Ice World

As you begin to thaw, the ice caverns look quite inviting. But you soon discover that icy slopes and slippery frogs don't combine well!

Run right down the slope, collecting the coins. Jump over the Snowman, collecting the coins on the way. Get the Speed-Up Pill, and leap over the spikes and across the ledge, getting the coins. Run up the next slope, getting the bonuses. Jump over the Penguin and get the coins. Run under the Ice-Crusher and you will come to an icy lake. Jump onto the iceberg, grab the coins and jump off again quickly (because you will slide off, and Superfrog doesn't like icy-cold water!) Enter a dark and spooky cave, and jump onto the ledge. Jump through the Mace-Head, get the bonuses and continue right. Run quickly under the Stalactites before they drop on you. Slide down the slope and get the Lucozade. Jump onto the ledge and over the snowman, grabbing the coins.

Jump over the spike pits, getting the coins as you go. At the end of the pits are three Ice-Crushers. Get past these and the Exit awaits.

Project F

With similar title screen and music to Project X, any fan of Team 17 will be amused by this tribute to the Team's first big hit. Just like the original game, just destroy the enemies and collect the bonuses. Check out the Project F glossary to see the enemy stats.

Space Level

Popping on your spacesuit, you set out on the final part of your mission: To reach the witch's interstellar lair.

To start with, DON'T jump on the springs to the left or right of you. They will catapult you into spikes in the roof. Jump to the left, shoot or squash the Floaters and collect the bonuses. Go back to the right and get more bonuses, but dodge the Walker. Grab the Lucozade, and jump up onto the ledge with the Bigmouth. Squash him and jump up to collect the

coins. Don't jump on this spring either, or you'll suffer the same fate as before. Dodge the Rotating Gun and run down the slope. Jump over the Mace-Head and activate Switch number One. Dodge the second Mace-Head and jump over the Transporter to get the bonuses. Now, enter the transporter to be beamed up to the next floor. Beware of the big LaserGun, and drop down onto some springs. Go right up some steps, dodging Laserguns and spikes. When you reach the top, beware of the Walker and jump onto the small ledge. Grab the coins (watch out for the Laserguns) and keep going right. Grab the bonuses and things, and squash another Bigmouth. Go up a set of ledges, beware of more Laserguns. At the top, go down another slope and dodge two more Mace-Heads. Grab a few more bonuses before going through the exit.

That's it for the first part of each level. The rest of each level will be similar to the first, so you should have no worries. One final tip - once you have collected the wings, use an autofire joystick to make flying a bit easier. That's it - have fun! □

Computer Adventure Games - Hints and Tips

(The Second Adventurers Realm Hint Book)

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Graham Gooch World Class Cricket

Daniel Rutter

"Lacking a national religion, the English invented cricket to give themselves a sense of eternity." I'm too lazy to look up who said it, but by and large I agree. So I approached the review copy of *Graham Gooch World Class Cricket* with a degree of trepidation - I anticipated an experience with all the dynamic excitement of an old folk's home dinner dance. GGWC, however, is actually rather good.

The game comes on one unprotected disk, with a tiny but comprehensive manual. There's no copy protection of any sort so the disk's easy to back up, but on the down side you can't install the game onto your hard disk.

The opening screen's a bit dodgy, but all of the other game graphics are really good and smoothly animated. You choose your squad of 20 players and the 11 you want to use for this game - there's an auto function to pick the best team - and then you pick your opponents, whose team you can also choose from the squad if you wish to recreate a given game. All nine Test teams are included, plus a "World XI" which would no doubt cause some debate among aficionados.

I picked the World XI, and for some really tough competition decided to go up against England. I won the well-animated toss and decided to bat first; after a flurry of willow on (well, mainly off) leather I was all out for eight.

The batting system is quite good - you view the pitch from the bowler's end, watching where the bowler's going to place the

ball and trying to line yourself up. When the bowler has let go of the ball you choose the stroke to play by moving the joystick to the appropriate position - although it took me a couple of wickets to figure out how to swipe at the blooming thing.

Assuming you've hit the ball, you then decide whether it's a good idea to run. If so, you revert to the age-old tradition of sport simulations and waggle the joystick like crazy to get the batsmen to change ends; if at any point taking another run looks a dodgy proposition, a tap on the joystick button returns the batsmen to their creases. Fours and sixes are handled automatically, returning the batsmen to their original ends.

Bowling is just as simple - aim the ball with the little square, hit the button, select direction of break or swing if you're controlling that sort of bowler, then waggle like mad. The amount of waggle controls the degree of break or swing, or the speed for a fast bowler. I tried really hard to do some evil short pitched deliveries, but it seems to be

FACTBOX

Even if you're not a cricket buff this game will entertain you. Smooth, detailed, accurate and playable.

Ratings:

Graphics:	85%
Sound:	75%
Gameplay:	80%
Overall:	80%

Distributed by Hot Point (02) 428 7791. RRP \$69.95.

impossible to hurt the batsman. Shame.

The fielders work automatically, but you can position them wherever you like. There's a special more detailed positioning screen for placing slips and the wicket keeper - which will happily allow you to put the keeper six feet to the left of the batsman if you really like giving away byes.

The control system for one player games is joystick to control play and mouse for the more complex options, which works very well; but you can also play a two player joystick game, which is a great way to learn since you're both about as incompetent as each other. You can also watch the computer play itself, but it didn't make me any better.

You can save your game at almost any point - handy, since even at the accelerated pace of the computer game some games can take many hours - and

all squads are editable. You can create whole new teams if you want, too, so statistics freaks can play about for hours.

Overall, GGWC is the best cricket simulation I've seen so far. Smooth, detailed, accurate, playable and not very boring at all. Even if you're not a cricket buff this game will entertain you, and the slick graphics can only help. It'll run on any Amiga with at least 1Mb of RAM. □



MICHAEL SPITERI'S

Adventurer's Realm

Welcome adventurers! To new adventurers who have joined us, congratulations ... you've just been linked into a huge base of hints and tipsters! This is the part of the magazine that tries to help out troubled adventurers everywhere - and we usually achieve it. Not only that, we provide many services to the adventure playing public. If you're stuck in an adventure, you can write to one of our many clever contacts scattered over the nation, or you can drop a line to Kerrie in the Free Hint Sheet Department. Finally, you can send your problem directly to me, and if I can't help, it'll be printed among these pages for all to see.

If you can help out a troubled adven-

turer with specific or general hints, please send them in. You can use out free classifieds or you get just send in a letter full of your comments!

The address to write to for stuff on adventure games, problems and hints is: Adventurers Realm, 12 Bridle Place, Pakenham, Vic 3810.

Kamikaze Andy lives in his Dungeon, and as well as occasionally supplying a roving report, he also supplies those role-playing game freaks with hints (but no hint sheets!). His address is: Realm's Dungeon, PO Box 1083, Canning Vale, WA 6155.

Always enclosed a stamped addressed envelope when writing to any address printed in this article.

she is giving away free hint sheets to anyone who asks. Remember, you must send Kerrie a stamped addressed envelope and a list of four games from the selection below. By the way, the address to write to is: Free Hint Sheets, 12 Bridle Place, Pakenham, Vic 3810.

Mortville Manor/Maupiti Island, Monkey Island 1, Monkey Island 2, Space Quest 3, Space Quest 5, Wonderland, Leisure Suit Larry 3, Champions of Krynn, Kings Quest 5, Pool of Radiance, Zak McKracken, Zork 1, Zork 2, Zork 3, Bards Tale 1, Bards Tale 2, Bards Tale 3, Hitchhikers' Guide to the Galaxy, Guild of Thieves, Jinxter, The Pawn, Corruption, Faery Tale, and the 1993 Clever Contacts Listing.

Free Hint Sheets

Kerrie, the Lady of the Realm, is swimming through this month's mail, sorting out all the hint sheet requests. Why does she have so many? Because

Realm's Hint Books

Hurry up and send in those orders for the First Official Realm Hint Book - we are nearly sold out! You can also order the Second Official Realm Hint Book that features detailed hints for over 25 games as well as pages upon pages of mapping sheets.

How much for all of this? Just nine dollars for the first and \$10 for the second, but be quick because the supply is running dry. Drop a line to Darren Perry at head office (21 Darley Road, Randwick, NSW 2031), or you can ring her on (02) 398 5111 for any additional information.

Realm's Official Adventure Solutions Disk Orders are coming in thick and fast for the new official solutions disk containing very detailed solutions to 95 (yes, you read right!) adventure and roleplaying games.

Graeme Beavan has done a great job putting this disk together which features dramatic icons and two main directories because all the games wouldn't fit on one. If you'd like this wonderful data, enclose a cheque for \$5 (payable to Michael Spiteri), a diskette, and a stamped addressed envelope. Or make the cheque \$7 and we'll supply the disk and postage costs. To ensure a quick turnaround, send it all to Realm's 1st Hint Disk, 12 Bridle Place, Pakenham, Vic 3810.

A big thanks to Compupal for supplying the Realm with a decent Amiga disk copier.

Clever Contacts

You can get a complete list of clever contact by writing to Kerrie in the Free Hint Sheets Department.

Only updates this month are:

Matthew Armstrong (see Chat for address), who can now also help in *Countdown*, but can no longer offer the *Bards Tale* Team disk as it was accidentally erased.

Stuart George (see Trading Post for address), who now adds *Space Quest III* and *Codename: Iceman* to his long list. (I refuse to publish your ICON joke, Stuart - it was terrible!).

If you would like to be a Clever Contact, send your details to the Realm and prepare for a flood of mail. Meanwhile, a big thanks to all the Clever Contacts for doing such a great job.

Chat, News, Gossip and Gags

News from the States has indicated the new *Zork, Return to Zork* is most definitely an icon driven graphic adventure game. This move might not win the hearts of the original Zorkers, but it might interest the curious Zorkers as to whether Activision's graphic representation is close to the image created by the classic text.

C64 owners rejoice - a new magazine has been created just for you. It even comes with a public domain disk and sells for only \$5. The June issue features heaps for adventurers, including the solution to *Maniac Mansion*, plus a free adventure game called *The Detective* on the attached disk. This little magazine has been put together by the boys and gals at Compupal. You can write to them at 116 MacArthur Street, Sale, Vic 3850.

Dean McIntosh of Greystanes, NSW writes ...

"Once again, congrats on a top info exchange, but why are there no hint sheets for *Eye of the Beholder I or II*?"

Mike: Good question, Dean. If someone out in roleplaying land can put together a combined hint sheet for the first two *Eye of the Beholder* games, please, please do so!

Very Regular Realmer Matthew Armstrong of 11 Harcombe St, Bell Post Hill, Geelong Vic 3215 has gathered his talents into his own software firm called Armour Software. \$1 will buy you his demo disk, (you have to supply the disk) and \$5 will buy you *The Great Space Race*. Drop him a line for a complete list of titles. Meanwhile, Matthew writes ...

"Does anyone know for sure whether *Space Quest 5* is in fact coming out on Amiga, and is *X-Wing* coming out on Amiga? I don't see why companies are dropping the Amiga. Yes, there are a lot

of pirates about, but I haven't heard of any companies dropping PCs, even though piracy is a problem with them too."

Mike: Unfortunately for Amiga users, the PC has a much bigger user base than the Amiga and is not hurt as much by piracy. Multimedia and CDs are taking off in a big way on the PCs which in turn will kill off piracy (you cannot copy CDs cheaply). Your average PC game uses between six and ten floppy disks, which also deters pirates. Don't worry though, the Amiga is huge in Europe and you can expect to see some great titles flow from overseas.

As for Sierra, they'd be silly to ignore the potential of the Amiga 1200. Electronic Arts are one company who will definitely be supporting the A1200.

I've been playing *Space Quest V* on the PC lately, and believe me, it's great for an icon driven adventure.

Adventurers Realm Trading Post

Not only does the Realm offer Free Hint Sheets, but we also offer Free Classified Ads. If you would like to swap, sell or search for any type of game, send the details to Realm's Trading Post, 12 Bridle Place, Pakenham, Vic 3810. Don't try to advertise pirated stuff, or we'll be very, very annoyed!

Peter Harvey of 14 McClintock Drive, Muswellbrook, NSW 2333 currently owns *Defender of the Crown*, *SDI* and *King of Chicago* for either *Castles* or *Ant Heads*.

Kent Reynolds of 114 Epping Road, Lane Cove, NSW 2066 has a *King's Quest I* hint book for sale. It's in perfect condition and is only \$9.00. If you don't want the book but you want some hints on *Kings Quest I*, you can ring Kent on (02) 427 2974.

Chris Turnadge of 29 Saphire Road, Morphett Vale, SA 5162 is after *Neuromancer*. He will pay top dollar for it or is willing to swap *Mean Streets*

for it. If you are in South Australia and can make a deal with Chris, then whoppee, otherwise drop him a line.

Jason West of 74 Matthews Avenue, Seaton, SA 5023 would like to buy *Ultima 4*, *Pool of Radiance*, or any other AD&D games for under \$25 for the C64.

Matthew Armstrong (see Chat for address) is searching high and low for the original *Zork*. Someone out there must have one stashed away under a trapdoor beneath their rug in the living room.

Matt Grocott of 48 Pinkstone Avenue, Cootamundra, NSW 2590 (06) 941 4146 (after 4pm weekdays) currently owns *Monkey Island II*, and would like to swap it for *Fate of Atlantis* (the adventure game) or *Legend of Kyrandia*.

Gavin Goodman of 79 Davies Avenue, Springwood, NSW 2777 has three games he'd like to sell. First up, *Hardball 2* (for \$20), then *Rise of the*

Dragon (also \$20), and finally *John Madden Football* (for \$30). Gavin will swap his titles, and he is after *ABC Monday Night Football*, *Maniac Mansion*, *Tipoff* or *Robocop 3*.

Derick Lyle of 37 Tukara Road, South Penrith, NSW 2750 has a whole swag of games available, including *Windwalker*, *Shoot'em'up Construction Kit*, *Paradroid*, *Gods*, *Wings of Fury*, *Nuclear War*, and *Lords of the Rising Sun*. Derick will accept offers, or will swap some for some good adventure games such as *Silver Blades* and *Monkey Island*.

Stuart George, 68 Sharon Street, Springvale, Vic 3171 has two PC shareware adventure game creators - *Quest Maker* and *Adventure Game Tool Kit*. Send Stuart a disk (any type) and \$5.00 to cover postage and you'll receive both programs.

Problems, Problems & more Problems or the Troubled Adventurers Dept.

First up is Regular Realmer Stuart George, who as usual, is neck deep in adventure type problems. Firstly he is still having trouble getting the mark of the snake in *Ultima III*.

However what's really troubling Stuart is *Time Quest*. Maybe we'll let him explain this one ...

"I have saved Caeser, made King John sign the Magna Carta, and raided

Peking with the Mongols. I have also escaped with a knife from a cannibal pot. What do I do now? Currently I am in Baghdad and up to my armpits with women in a harem (Mike: Some problem!) trying to find one that is having an affair with someone else. Is it possible to sneak away from the palace while wearing a veil (WHY!).

In another part of the game, how can I make the girl hide? She is in the basket but I can't lift her onto the mule. What gift does King Tut want? How can I become tall enough to see through the window in the temple of Mexico?"

Mike: Boy, Stuart, are you sure it's *Time Quest* you are playing, and not *Leather Goddesses of Phobos*? Anyway, can anyone help him out in his interesting, to say the least, dilemma?

Stuart would also like to know what to do with the ghost in the cemetery in *Colonel's Bequest*.

Also stuck up to his neck is Matthew Armstrong, who writes ...

"Any help in the Omnicron Conspiracy would be of help, and would someone please help me and my mate Andrew Malden get out of the furnace room in *Dagger of Amon Ra*. Finally, what are the exact words to type in *Larry 2* to put the soap down your top while at the island?"

Jason West of Seaton in SA is having trouble in *Ultima 6*. He would like to know where Captain John is and how to get there. Also, a man in Paws (or cat who runs the pub) wants to buy a book about gambling or something.

Mike: I think if you know what Jason's on about you are half way to solving that problem. Oh yes, forgot to mention that back in June, Jason West wanted help in *Jack the Nipper* not *Jack the Ripper*. Hey, it was an easy mistake to make!

Help, Help & more Help or the Smart Adventurers Dept.

Game: Enchantia

For: Person with no name (May issue)
From: Matthew Armstrong and Graeme Beaven

Matt's Help: You have to do everything possible in the cave section before the well is fixed and you cannot catch the gray sponge dudes. Chase them all out and you'll find something in one of the holes. For the string, use a magnet with the rope that you get from Mr. Rock Crusher.

Graeme's Help: Look in all four holes until a little creature runs out, then look again and get the twigs. Join the string from the guru with the magnet and throw it in the hole to get the spool. Use the spool with the eyebolts and then go to the wishing well.



Game: Indy 4

For: Stephen Treloar (June Issue)

From: Matthew Armstrong

Help: (stuck at set of skulls) If you are playing *Last Crusade*, the answer can be found in the diary that comes with the game. If you are referring to *Fate of Atlantis*, then I can't help.

Game: Colonel's Bequest

For: Peter Coleough

From: Stuart George

Help: There are more than four secret rooms. It's a pity you didn't say what part of the game you were up to (ie. what time was it on the clock that is

periodically set after each important event). However, here are some hints for you. Feed the dog and check out his kennel. There is a creaky board in the church that needs a good lift. The horse likes a carrot but you have to befriend Celie with some jewelry first. The Colonel is actually a good guy so don't shoot him at the end. The location of most of the bodies is the basement (I think) but as yet I have not been able to enter it without dying. Follow Rudy around when he goes outside to see a good fight. There is a key hidden in the cannon in the Colonel's Room that operates the lift. You can only open the suit of armour with some oil. The key inside is for the fountain.

Game: Eye of the Beholder

For: Matthew Beetson

From: Stuart George

Help: As far as combination locks go on Level 9, the only sort of combination lock is where you have to put some armour in one wall, a sword in another, rations in another wall and a rock or arrow in another. After all this the door in the south should open up.

The Dungeon

by
Kamikaze Andy

While adventurers are still waiting for the Amiga version of *Darkseed*, the acclaimed horror adventure game from CyberDreams (*Mike: Actually, it was reviewed in June ACAR*), the company has released press information on a new product slated for Christmas release. Titled *CyberRace*, this is a mixture of arcade/simulation/adventure (how's that for trying to appeal to every possible market?) featuring 3D visuals and video-realistic footage. Indeed, the graphics on this baby will blow everything else off the software shelf - from stunning colours to the high resolution level to the amazingly fluid animation. Add a touch of digitized dialogue between the game's characters and a professionally produced musical score, and you have what is shaping up to be a potential blockbuster.

SSI's *Eye Of The Beholder III* looks

like being the last of the series, and features some of the toughest battles you will ever face in any RPG. As can be expected, the interface retains the same look as its predecessors, apart from a few cosmetic touches (like new monster portraits and animated scenes). Expect this latest AD&D installment to arrive at the stores in a few month's.

The long awaited *DarkSun* is due to materialize later this year, while the much hyped science fiction RPG simply called *M* might not make it - ever. The reason? SSI has recently retrenched some of its staff in an effort to cut back on expenses, which explains the delays in producing Amiga conversions (and even PC versions are feeling the pinch!).

SSI's horror RPG *Veil Of Darkness* has still a 50-50 chance of undergoing the Amiga conversion process, but the continuing worldwide recession is having a detrimental effect on the computer entertainment scene, and ultimately the ones who suffer are those products that can't be guaranteed bestsellers.

Veil Of Darkness only performed moderately in sales for the PC so Amiga owners might miss out altogether.

Similarly for MicroProse (who "gave up" more than 30 staff members) and their plans to convert more of their popular PC titles to Amiga format. It now looks as though their first adventure attempt, *Rex Nebular And The Cosmic Gender Bender*, might not bend its way towards an Amiga version. Which, from the feedback of adventurers who played the PC version, might actually be a blessing in disguise ...

The situation at Sierra is just as serious, they lost upwards of 50 people from both the parent company and its subsidiary Dynamix. Indeed, quite a few of the well known Sierra designers have opted to start their own companies, creating games and then selecting the best offers from the various software publishers around. Of course, the strong links between these designers and Sierra means that most of the final "independent" products are marketed under the Sierra label anyway (like Al Lowe's latest offering, the cowboy-comedy adventure *Freddy Pharkas: Frontier Pharmacist*) but there are some, like *Police*

Quest designer Jim Walls, who have opted for better deals. Walls' next production, *Blue Force: The Next Of Kin* is due to ship from newcomers Tsunami.

Speaking of Tsunami, the company is apparently under threat of lawsuit from Sierra for alleged theft of programming code. Could this have something to do with Walls' defection to the company, I wonder. So far, Tsunami has released *Ringworld* (based on the novel(s) by noted science fiction author Larry Niven) and *Protostar: War On The Frontier*, on the PC. No news as yet on any possible Amiga conversions.

Sierra's schedule is similarly congested, with forthcoming adventures like *Space Quest V: The Next Mutation* (yet another episode in the adventures of hapless space janitor cum hero Roger Wilco), *EcoQuest 2: Lost Secrets Of The Rainforest* (this time our young hero Adam tries to save the Amazon forest from destruction), *Gabriel Knight* (a suspense thriller set in New Orleans), *Codename: Phoenix* (a new spy thriller in the same vein as *Codename: Iceman*), Al Lowe's *Freddy Pharkas*, and apparently, *Police Quest IV*!

The new goblins currently employed by the Dungeon aren't too sure whether Sierra had intended Jim Walls' *Blue Force* to be the next *Police Quest* before his decision to switch publishers. If so, there's going to be some late night designing and coding going on at Sierra's Coarsegold headquarters to make the Christmas 93 deadline!

Coming up in the next few Dungeons:

The latest from LucasArts, including the long awaited *Indy And The Fate Of Atlantis*, *Day Of The Tentacle (Maniac Mansion II)* and a science fiction adventure from Brian Moriarty (he who wrote *Loom* and the classics *Trinity* and *Wishbringer*) titled *The Dig*.

And, a look at the rush of CD-ROM games that are poised to hit the markets (sadly, most are on the Multimedia MPC format, not CDTV). Come on Commodore! CDTV/Amiga CD-ROM needs a push before we're overrun by MPC, CDI, Sega MegaCD, Nintendo SNES-CD, and Tandy's new VIS CD system!

Advertiser's Index

ACAR Subs Form	39	Hargware	52
Allens	29	Impulse	
Amadeus Computer	51	Logico	19
Amitech	40, 41	Megadisc	49
AmigaP/D Ctr	61	Meghead	15
Amiganuts	63	MVB	10, 11
BitMaster	61	Off the Planet	57
Brunswick	63	PCM	57
C64 Software	63	Pactronics	4
Caradoc	63	Parcom	61
Clip Art Collection	63	Pelham	63
Code One	63	Phoenix	23
Computa Magic	53	Power Peripherals	
Commodore	3, 5, 7, 9, 65, IBC IFC, 47, 70, 71	Prime Arifax	66, 67
Computer Man	2	Rod Irving	63
Computer Outpost	18	Runwell	63
Computer Spot	25	Scarlet	63
CPA	44	Sigmacom	30, 31
Desktop Utilities	13	Shop 4	45
Don Quixote	21	Software to Go	57
Electronic Design	OBC	Solutions Rendered	37
Fairbrothers/Mallee	56	Softwood	34, 35
Fonhof	52	Tupsoft	12
G-Soft	28	Unitech Electronics	59

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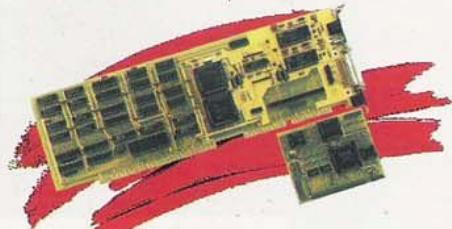
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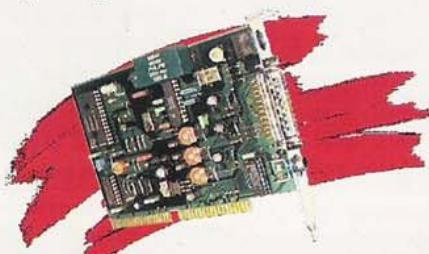
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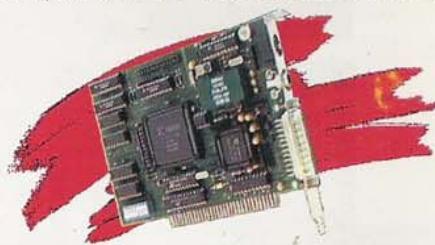
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